DOCUMENT RESUME

ED 329 074 EC 300 070

AUTHOR	Dunn, Winnie; And Others
TITLE	Managing Occupational Therapy in Rural Education (M.O.R.E.).
INSTITUTION	Kansas Univ., Kansas City. Medical Center.
SPONS AGENCY	Office of Special Education and Rehabilitative Services (ED), Washington, DC.
PUB DATE	Jun 90
NOTE	326p.
PUB TYPE	Reports - Descriptive (141) -- Tests/Evaluation Instruments (160)
EDRS PRICE	MF01/PC14 Plus Postage.
DESCRIPTORS	*Educational Needs; Elementary Secondary Education; Higher Education; Models; *Occupational Therapy; *Physical Disabilities; Professional Education; Program Validation; *Rural Education; Student Needs; Validated Programs

ABSTRACT

The purpose of this project was to design, implement, and validate a preservice training program to enable occupational therapy students to work effectively in rural public schools. The project sought to improve the knowledge, skills, and attitudes of these students in regard to the unique social, environmental, and educational needs of the rural setting. The project validated the rural training model by collecting and analyzing ongoing data from project staff, students, and clinical and fieldwork personnel; it also developed and implemented a plan to disseminate and replicate the validated model. This report describes project design, findings, impact of project findings, and dissemination activities. A section of resource materials contains background information and article reprints on the topics of preassessment, service provision, time management issues, and common disabilities. Activity sheets offer guidelines for such activities as eye-hand coordination, scissors skills, facilitating independent mobility, and therapeutic activities using scooter boards. A bibliography of 17 items and lists of national resources, national toll-free numbers, and resources in Kansas are also provided. Appendices contain administrative materials, questionnaires, needs surveys, competency lists, consent forms, and other project-related items. (21 references) (JDD)

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ED 329074

MANAGING OCCUPATIONAL THERAPY IN RURAL EDUCATION

June, 1990

The University of Kansas Medical Center

Occupational Therapy Education
The University of Kansas Medical Center
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EC 300070

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Managing Occupational Therapy in Rural Education (MORE) is affiliated with the Occupational Therapy Education Department at the University of Kansas Medical Center. The MORE project was developed under federal grant G008730057 *from the Office of Special Education and Rehabilitation Services, the U.S. Department of Education.*

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ACKNOWLEDGMENTS

The MORE project is the result of the hard work and support of many people. A major emphasis of the project as been gathering data through the use of questionnaires. Many parents, educators, administrators, and occupational therapists in rural areas completed questionnaires and returned them to us. Also, occupational therapists in urban areas completed questionnaires, which helped us to further identify the unique attributes of rural school systems. Special thanks go to the occupational therapy students at the University of Kansas classes, Fall 1987 to Spring 1989, for completing questionnaires throughout their pre-service education.

The project staff were fortunate to receive consulting advise from Gloria Frolek Clark, Cassie Lauver, Rodney Karns, Shawn Reeves and Barbara Flett.

Linda McClain, Letha Mosley, and Lynne Crabtree supported the project by identifying rural public school fieldwork sites. They also encouraged students to choose the rural fieldwork sites to further support the project. Our fieldwork sites provided the valuable on-site training needed by our OT students. Shawn Reeves, Bobara Broce, Paula Hughes, Sandy Ward, Laurie Hess, Esther Nellens, Becky Nickolson, and Carrie Carlson served as excellent supervisors for our students.

Thanks also goes to our support staff Kevin Birchard, Carolyn James and Bonnie Danley. They compiled and assisted with library research and provided excellent expertise in production of materials for dissemination of this project.

Sue Merryfield, Susan Siler, and Tina Gelpi provided their assistance by reviewing our proposals.

The creative designs on the cover and pages of this manual are the products of collaboration between Kevin Birchard and Paula Hughes. Kevin's expertise in computer use made the assimilation of the manual go smoothly.

Finally we want to thank Winnie Dunn, project director for writing the grant; Paula Hughes, project manager, for keeping the project on track; Brenda Rowley-Gray for initial set-up and contributions throughout, and Debra Cook for incorporating methods into the pediatric courses.

Thank you to each and everyone who gave of their time and talents to help develop the rural pre-service curriculum. Our hope is to enhance the quality of rural school system for children with special needs.

The MORE project was developed to design, implement, and validate a pre-service training program for occupational therapy students to be better prepared to serve in public schools, particularly those in rural settings.

The MORE project is affiliated with the University of Kansas Medical Center, Occupational Therapy Department, School of Allied Health, Kansas City, Kansas (Dunn, 1986). It was developed under federal grant, GOO873OO57, from the Office of Special Education and Rehabilitation Services, the U.S. Department of Education. The project was carried out in collaboration with seven public school systems, which served as rural fieldwork sites:

Area 7 Education agency, Cedar Falls, Iowa
Supervisor: Carrie Carlson

Geary County Schools, USD #475, Junction City, Kansas
Supervisor: Bobara Broce

Leavenworth County Special Education Cooperative, Leavenworth, Kansas
Supervisors: Shawn Reeves/Becky Nicholson

Ottawa Public Schools USD #290, Ottawa, Kansas
Supervisor: Paula Hughes

Research Medical Center, Kansas City, Missouri
Supervisor: Laurie Hess

Russell Child Development Center, Garden City, Kansas
Supervisor: Esther Nellans

St. Johns Hospital, Salina, Kansas
Supervisor: Sandy Ward

SECTION 1

REPORT OF PROJECT ACTIVITIES

Occupational Therapy Education
The University of Kansas Medical Center
Kansas City, Kansas 1990

BASIC INFORMATION

Overview of the MORE Project

The MORE project was created to develop a pre-service training model for occupational therapy students which would enable them to work more effectively in rural schools systems. Such a model is needed because rural areas are lacking in related services personnel, and professionals are not prepared to meet the unique needs of a rural school system at the pre-service level.

Occupational therapy is mandated as a related service in Public Law 94-142 for those students who require services to benefit from their educational experiences. For some students, occupational therapists are a critical part of the interdisciplinary team that develops and implements the individualized educational plan (IEP). Smaller and more rural school districts currently face several disadvantages in attempting to secure the services of occupational therapists as related service personnel in their schools. First, the areas to be served are often geographically distant from metropolitan areas, which have a larger variety of business, social and educational opportunities; this makes it difficult to recruit experienced professionals to relocate to the area. Secondly, there are smaller numbers of special education students requiring service due to a smaller population in general which means that perhaps only one occupational therapist is required to serve the designated area. Lack of on-going professional contact makes it difficult for the new graduate to take a job in a rural setting without specialized pre-service experiences which address not only the knowledge and skills to work in public schools, but the additional expertise required to tailor these competencies to the unique needs of a rural setting.

Goals and Objectives

The principal goals and objectives of the MORE project are:
GOAL 1: TO DEVELOP AND IMPLEMENT A MODEL FOR TRAINING PRESERVICE OCCUPATIONAL THERAPY STUDENTS IN SPECIALIZED TECHNIQUES AND PROCEDURES THAT ENABLE SUCCESSFUL SERVICE PROVISION IN RURAL SCHOOL SETTINGS.

Objective 1.1: to identify necessary knowledge, skills, and attitudes required to successfully provide occupational therapy as a related service in rural school settings.

Objective 1.2: to assess baseline performance in knowledge, skills and attitudes of the preservice occupational therapy student.

Objective 1.3: to assess local demographic values, the need for occupational therapy service, acceptance of alternate service provision patterns and willingness to train students in rural school programs in the midwest.

Objective 1.4: to develop competencies needed by occupational therapy students to successfully provide services in rural school programs, using information from objectives 1.1 and 1.3.

Objective 1.5: to establish instructional procedures, including didactic, laboratory, independent study and fieldwork experiences which will enable attainment of competencies established in Objective 1.4.

Objective 1.6: to provide the model training program components to preservice occupational therapy students in the Occupational Therapy Curriculum at the University of Kansas.

Objective 1.7: to establish criteria for selecting preservice occupational therapy students for a specialized three month fieldwork experience in a selected rural school program.

GOAL 2: TO VALIDATE THE RURAL TRAINING MODEL BY COLLECTING AND ANALYZING ONGOING DATA FROM PROJECT STAFF, STUDENTS, CLINICAL AND FIELDWORK PERSONNEL.

Objective 2.1: to assess changes in the knowledge, skills and attitudes of the preservice occupational therapy students throughout their professional education.

Objective 2.2: to determine attainment of competencies by occupational therapy students as established in Objective 1.4.

Objective 2.3: to evaluate satisfaction with outcomes of the project from both the rural personnel and the preservice occupational therapy student's perspectives.

Objective 2.4: to assess the impact of the training project on the rural settings themselves.

GOAL 3: TO DEVELOP AND IMPLEMENT A PLAN TO DISSEMINATE AND REPLICATE THE VALIDATED RURAL EDUCATION TRAINING MODEL FOR OCCUPATIONAL THERAPISTS.

Objective 3.1: to prepare training materials for use at other universities whose occupational therapy students are candidates for rural positions when they complete their professional education.

Objective 3.2: to prepare materials for use by rural school personnel to maximize their capabilities for providing appropriate occupational therapy students for their location.

Objective 3.3: to disseminate the validated materials and information to appropriate regional and national audiences.

Objective 3.4: to prepare for the continuation of the validated model as part of the OT Curriculum at the University of Kansas and to replicate the model at other midwest universities.

GOAL 4: TO ADMINISTER THE PROPOSED OCCUPATIONAL THERAPY PRESERVICE TRAINING PROJECT EFFECTIVELY.

Objective 4.1: to conduct effective fiscal management of the project.

Objective 4.2: to conduct effective personnel management of the project.

Objective 4.3: to conduct effective programmatic management of the project.

Purpose of Project

The purpose of the MORE project is to demonstrate a model to train pre-service occupational therapy students to work effectively in the public schools, specifically those in rural settings. this effort is directed at improving the knowledge, skills and attitudes of occupational therapy students in regard to the unique social environmental and educational needs of the rural setting so that they will be more prepared and have a greater ability to pursue job opportunities serving rural districts.

Program Description

The proposal for MORE was written and submitted in the late Summer of 1986. Funding was granted and the project began on July 1, 1987. Notices were placed in state Occupational Therapy, and educational news publications to solicit participation in pilot studies and initial project setup. Practicing urban and rural school-based occupational therapists volunteered to participate in the pilot project by responding to questionnaires (see Appendices for copies of questionnaires). Rural therapists were also recruited to provide fieldwork sites for the MORE project, and act as fieldwork supervisors. A fieldwork site was defined as rural when the school district has less than 10,000 students (Helge 1981).

University of Kansas Occupational Therapy students were also asked to participate in the project in the Fall of 1987. Students who were in their first, second, and last semester of professional training were asked to respond to a set of questionnaires. Their responses have been used as a baseline for comparison to later classes. Materials to assess and teach necessary pediatric competencies were also being developed at this time, to further enhance the pediatric pre-service curriculum.

In the Spring of 1988 questionnaires (see Appendices) were sent to parents, educators, and administrators at the rural school systems which were chosen to serve as MORE fieldwork sites, as a means of collecting demographic and baseline data. The initial data were also presented at the American Council on Rural Education Services (ACRES) and American Occupational Therapy Association (AOTA) National Conferences during this period.

The first consultants' meeting took place in March 1988. This included the Director of Kansas Crippled and Chronically Ill Children's Program, an administrator of a Special Education cooperative, and a rural school-based therapist. University Occupational Therapy pediatric and fieldwork faculty were also present. Project staff reviewed the year's activities and solicited input for the direction the project should take for upcoming years.

In the fall of 1988 data collection continued, as well as the development of curriculum materials. Activity Guide Sheets (see Section II) were written, to further enhance the pediatric course materials. These provide specific intervention techniques that may be used by a school-based therapist. Update notices were placed in regional occupational therapy newsletters and over the Special Net bulletin board. National information clearinghouses were contacted and information relating to pediatric issues was solicited. This information was integrated into the pre-service curriculum.

Project staff gave presentations on data results, intervention techniques, and service provision in the Spring of 1989 at ACRES, AOTA, KOTA, and the International Symposium on Special Education in Canada. Staff and consultants met to discuss progress and make future plans for the grant in its final year. The first set of fieldwork students went to the rural settings, which proved to be positive experiences.

Throughout the 1989-90 school year staff collected and tabulated data from those involved with the study. Ten students completed their MORE fieldworks, this manual was produced (with a supplement targeted just for occupational therapists) and a June workshop conducted for Creighton and the University of Missouri faculty as well as selected rural school-based therapists.

Philosophy

The need for competent related service personnel, particularly occupational therapists, to serve in rural educational areas has been well documented. Two-thirds of all United States schools are located in rural areas, and the majority of unserved and underserved handicapped children are enrolled in these rural schools (Clark and White, 1985; Massey and Crosby, 1983).

A major problem in rural education is recruitment and retention of qualified staff (Helge, 1984; Will, 1985; Latham and Burnham, 1985; Kirner, Lockwood, Mickler and Sweeney, 1984; Marrs, 1984). A 40% to 50% attrition rate annually is typical (Will, 1985). A survey conducted in 1983 by the National Rural Project reported that only 17% of the rural districts and special education cooperatives indicated that they had an adequate number of special education personnel. In a recent report filed by the Ad Hoc Commission on Occupational Therapy Manpower, the data collected annually by the U.S. Office of Special Education

Programs, U.S. Department of Education, reports the needs for occupational therapists have consistently outnumbered the supply. In 1983, state special education departments indicated a need for 20.5 percent more occupational therapists than were currently employed under Part B funding of P.L. 94-142 (Ad Hoc, 1985). Helge (1984) notes that itinerant positions such as occupational therapists, are most often not filled. Inadequacies of preservice training which consider rural needs contribute to the chronic vacancies of these positions.

Recognizing the need for preservice training of occupational therapists to serve in school systems, the Bureau of Education for the Handicapped in 1978 funded in American Occupational Therapy Association to develop a model for training occupational therapists employed in school systems (Gilfoyle and Hays, 1979). The Special Education Department at the University of Kansas developed a special tract for occupational and physical therapists pursuing a masters degree in Special Education. Their project, funded by OSERS in 1980, developed an implemented a model to prepare therapists to serve as consultants to programs for students with severe disabilities in public school settings.

In order for therapists to integrate their services into the rural school system they need to have an understanding of the system, its educational aims, and its philosophy (Regan, 1982). Punwar and Wendt (1980) outlined the effort to mandate occupational therapists in Wisconsin to be certified by the Department of Public Instruction for those therapists serving in public schools. Identification of competencies and relevant curriculum content were established as the cornerstones of certification standards.

State Educational Agencies Representatives from Iowa, Nebraska, Kansas and Missouri recognized the need for preservice training and reported chronic vacancies in rural settings for occupational therapists. Additionally, all reported that due to these lack of services, children with special needs are either unserved, underserved, or most travel to the closest urban setting for services.

All special education directors reported that of all related service personnel an occupational therapist could best serve their programs' needs. This preference was also supported by a survey completed by Guess (1980) at the University of Kansas. Teachers of severely multiply handicapped students ranked their perceptions of contributions from other professionals and disciplines in the education and treatment of students in their classroom, using a five point scale. The results indicated that teachers perceive occupational therapists as the most needed service. Survey results are illustrated in Table A.

Additional concerns expressed by special education directors include (1) lack of preservice training for occupational therapy serves in school settings, (2) difficulty with currently employed therapists continuing to rely solely on the medical model and (3) inability of therapists to identify and implement appropriate methods and amounts of service provision in rural education settings. The need to alter and adapt types of service provision for occupational therapists in rural settings is essential. Through preservice training, the necessary understanding of the roles of a consultant and knowledge of different types of service provision can be taught.

This project was designed to adequately prepare occupational therapists to serve in rural school districts. It is the beginning of a long-term effort to make significant contributions for implementation of preservice training programs that are essential for rural special education needs, especially the need for well prepared related service personnel.

Table A
Severely Multiply Handicapped Teachers' Perception Survey

Profession/Discipline	Mean Point on 5-point Scale	Overall Ranking
Occupational Therapy	4.52	1
Physical Therapy	4.08	2.5
Speech Pathology	4.08	2.5
Medicine	3.20	4
Nursing	3.04	5
Social Work	2.76	6
Psychology	2.66	7

Summary of Project Goal Attainment

Goal 1: To develop and implement a model for training preservice occupational therapy students in specialized techniques and procedures that enable successful service provision in rural school settings.

Objective 1.1 To identify necessary knowledge, skills, and attitudes required to successfully provide occupational therapy as a related service in rural school settings.

Analysis of data gathered from initial surveys and questionnaires completed by occupational therapy personnel in both rural and urban settings were summarized by the project staff. This analysis is included in the findings section of this document. The information gathered has been incorporated into the educational components of the training model.

Objective 1.2 To assess baseline performance in knowledge, skills, and attitudes of the preservice occupational therapy students.

Baseline performance was assessed in two ways. First, students completing their academic preparation at the beginning of the project were assessed as a project baseline (no project components implemented). Secondly, each participating class was assessed as they entered the curriculum as a baseline for themselves and as a pretest of project component effectiveness. Data are reported in the findings section of this dissemination document.

Objective 1.3 To assess local demographic values, the need for occupational therapy service, acceptance of alternative service provision patterns, and willingness to train student in rural school programs in the midwest.

Data gathered from initial surveys and questionnaires was used to determine possible sites for the M.O.R.E. project fieldworks. Project Staff contacted potential fieldwork supervisors and set up contracts.

Objective 1.4 To develop competencies needed by the occupational therapy students to successfully provide services in rural school programs, using information from objectives 1.1 and 1.3.

Competencies were developed by the project staff from initial data collected from therapists. These competencies were approved by the Occupational Therapy Curriculum Committee and have become part of the departmental curriculum. Additionally, supportive teaching materials were developed and incorporated into appropriate coursework. All materials have been included in the M.O.R.E. dissemination products.

Objective 1.5 To establish instructional procedures, including didactic, laboratory, independent study and fieldwork experiences which will enable attainment of competencies established in objective 1.4.

Instructional procedures were developed by the project staff and approved by the Occupational Therapy Education faculty. (See Section II of this project manual for examples). Materials were placed in the official resource files for the Occupational Therapy Curriculum to be used in future courses.

Objective 1.6 To provide the model training program components to preservice occupational therapy students in the occupational therapy curriculum at the University of Kansas.

The model training components were incorporated into the appropriate courses in the Occupational Therapy Curriculum. Information is included to enable the students to develop competencies appropriate to rural school service provision. The materials have become an integral part of the curriculum and will be used beyond the project's termination as part of the curriculum resource files.

Objective 1.7 To establish criteria for selecting preservice occupational therapy students for a specialized three month fieldwork experience in a selected rural school program.

The fieldwork coordinator met with the students to discuss the rural fieldwork opportunities and benefits. Financial aid through stipends and mileage reimbursement was explained (addressed in-depth in Objective 4.1). Project staff selected students who expressed an interest in the rural fieldwork model and agreed to participate in survey completion. A total of 10 students completed M.O.R.E. Level II fieldworks.

Goal 2: To validate the rural training model by collecting and analyzing ongoing data from project staff, students, clinical and fieldwork personnel.

Objectives 2.1 To assess changes in knowledge, skills and attitudes of the preservice occupational therapy students throughout their professional education.

Data collected from initial and follow-up responses to surveys and questionnaires were compared and visually analyzed to determine the amount and type of changes in knowledge, skills and attitudes of the preservice occupational therapy students. Follow-up data was collected from students completing their academic coursework and fieldwork experiences through Year Three. Information provided feedback for incorporation of the materials into the appropriate coursework. Data analysis is included in the findings section of this project manual.

Objective 2.2 To determine attainment of competencies by occupational therapy students as established in Objective 1.4.

Successful completion of coursework and fieldwork as well as course and fieldwork performance evaluations provided measures of attainment of the established competencies. Knowledge competencies were assessed in first and fourth semester OT students and then again at the completion of fieldwork. Project staff and clinical supervisors reviewed, revised and finalized teaching materials from these measures, and they became part of the appropriate courses. Data from these measures are analyzed and reported in the findings section of this project manual.

Objective 2.3 To evaluate satisfaction with outcomes of the project from both the rural personnel and the preservice occupational therapy students' perspective.

The level of satisfaction of the M.O.R.E. project participants was an important component for the project's success. Rural fieldwork sites reported a high degree of satisfaction with fieldwork student performance. Students also reported satisfaction with their experiences. Identification of strengths and possible weaknesses in the program provided information to adapt the training model to encourage more students to participate in rural fieldwork both in Year Three and in the future.

Objective 2.4 To assess the impact of the training project on the rural settings themselves.

To identify attitudes in rural personnel, the Level II fieldwork supervisors were asked to submit the names of one administrator, four parents, and four teachers who worked with preservice occupational therapy students during their three month fieldwork experiences. These team members were asked to complete the Classroom Integration Questionnaire, Teacher Educational Attitude Questionnaire, Selected Children's Background Questionnaire (parents only), the Family questionnaire (parents only), and Rural Needs Survey. The data was analyzed throughout the project and adjustments were made to enhance student learning experiences.

Goal 3: To develop and implement a plan to disseminate and replicate the validated rural education training model for occupational therapists.

Objective 3.1 To prepare training materials for use at other universities whose occupational therapy students are candidates for rural positions when they complete their professional education.

Training materials were packaged in notebook form for ease of use by curriculums. During Year Three, the Project Staff presented a training workshop for the Occupational Therapy Curriculums at Creighton University and University of Missouri-Columbia; project fieldwork supervisors were also included.

Objective 3.2 To prepare materials for use by rural school personnel to maximize their capabilities for providing appropriate occupational therapy services for their location.

The project staff distributed materials to rural school personnel throughout the project. These materials included resource materials emphasizing those aspects of school based service provision that were critical for rural locations. The project staff was available on request to provide consultation and specialized therapeutic services to rural school districts. Materials are included in Section II of this project manual. Other dissemination activities are reported in the Dissemination section of this manual.

Objective 3.3 To disseminate the validated materials and information to appropriate regional and national audiences.

News articles and announcements were submitted periodically to appropriate newsletters targeting occupational therapists and educators locally, statewide and nationally (American Occupational Therapy Association, Special Net National Rural Consortium). The project staff submitted proposals to relevant state (e.g., KU Council on Education, State OT Associations, State Council on Education) and national conferences (e.g., AOTA National Conference, ACRES Annual Conference). Interim reports were presented to these groups. Final reports were submitted at the end of the project.

Final dissemination documents were prepared by the Project Staff and included data gathered and analyzed through surveys and questionnaires throughout the project, training modules and instructional materials, and a resource bibliography.

Objective 3.4 To prepare for the continuation of the validated model as part of the OT Curriculum at the University of Kansas and to replicate the model at other midwest universities.

Plans for replication of the training model in the Occupational Therapy Education Departments at Creighton University in Omaha and University of Missouri-Columbia were presented by the Project Staff at a workshop in June 1990.

Preparation for the continuation of the model as part of the Occupational Therapy Curriculum at the University of Kansas took place during Year Three. Project Staff finalized all materials and placed them in the official resource files of the curriculum.

Goal 4: To administer the proposed occupational therapy preservice training project effectively.

Objective 4.1 To conduct effective fiscal management of the project.

Changes in the budget reflected an increase in staff expenses for dissemination of information to other occupational therapy curriculum. Stipend and mileage reimbursements for students affiliating in rural sites were increased to encourage more student participation. Students reported in Year One that the stipend that was offered was insufficient for them to secure housing and pay at least some of their operating and living expenses while on the rural fieldwork. Only those students who had family or friends to stay with were able to take advantage of these rural experiences. Students were satisfied with the stipend increases in Year Two and Year Three. The project budget was administered according to federal and university guidelines.

Objective 4.2 To conduct effective personnel management of the project.

Roles and responsibilities of the staff changed according to the needs of the project. All tasks were completed according to original timelines.

Objective 4.3 To conduct effective programmatic management of the project.

In summary, all goals and objectives originally planned for the Managing Occupational Therapy in Rural Education Project were addressed as originally described and within the timeline appearing in the proposal document. Administration of the project addressed goals and objectives as originally stated.

Project Design

Participants

The MORE project involved a wide variety of voluntary participants in different capacities. Each group of participants are described in this section.

Fieldwork Supervisors. MORE fieldwork sites were chosen by the fieldwork coordinator and project manager. To be considered a rural site the facility had to be in, or hold a contract with a school district of less than 10,000 students. Some fieldwork sites were already being used by University of Kansas students. Additional sites were solicited by placing notices in occupational therapy newsletters and educational bulletin board services. Eleven sites were identified as acceptable rural fieldwork settings. The facilities which agreed to provide fieldwork training entered into a contract with the University of Kansas (Appendix 1). There were a total of 7 sites utilized for fieldwork experience. Five were located in the Kansas cities of Junction City, Garden City, Ottawa, Leavenworth, and Salina. One site was outside Kansas City, Missouri and one in Cedar Falls, Iowa. Four of these facilities were in an educational cooperative, two were hospitals which provided occupational therapy to rural school districts via contract services, and one site was based in a single school district.

The sites employed an occupational therapy staff of one to six. The fieldwork supervisors had from 5 to 21 years of experience. Individuals aged 0-19 years were served, with diagnoses including juvenile rheumatoid arthritis, cerebral palsy, learning disabilities, mental retardation, hemiplegia, developmental disabilities, degenerative neurological disorders, and motor disorders. A wide range of intervention methods are used in these settings.

Fieldwork Site Participants. Parents, educators, and administrators of children who received occupational therapy services were asked to respond to sets of questionnaires. Nineteen parents, twenty-one teachers and administrators returned survey materials.

The questionnaires completed by the parents indicated that the majority were involved in their children's daily and school routines, were caucasian, and employed. Ninety percent of the respondants reported that they were middle class, and that both parents were present in the home. All spoke English in their homes.

The educators responded to questions about the unique needs of rural special education, and the role of occupational therapy in the school system. Overall the educators in this study indicated they had a basic knowledge of occupational therapy. Their responses will be discussed further in the findings section of this document.

Persons considered as administrators included special education directors and principals. Their responses will also be discussed in the findings section of this document.

Urban and Rural Registered Occupational Therapists. School-based pediatric occupational therapy personnel who practiced in the states of Kansas, Iowa, Nebraska, and Missouri were sent questionnaires and surveys. Both urban and rural based personnel were included. For purposes of this study, criteria established by Helge (1984) were used to determine those personnel serving in rural communities and those serving in urban communities.

Table B
Timeline of Professional Education for Preservice Occupational Therapy Students at the University of Kansas

	0-6 months	7-12 months	13-18 months	19-24 months	25-30 months	31-36 months
Spring 1987 Class 1	Junior Year Courses — — Level I Fieldwork	— — — — — — — — Level I Fieldwork	Senior Year Courses Level I Fieldwork Advanced Topics Special Studies	Level II Fieldwork — —	— — — — — — — —	
Fall 1987 Class 2	Sophomore Year Courses Level I Fieldwork	Junior Year Courses — — Level I Fieldwork	— — — — — — — — Level I Fieldwork	Senior Year Courses Level I Fieldwork Advanced Topics Special Studies	Level II Fieldwork —	— — — — — — —
Fall 1988 Class 3		*acceptance into OT curriculum*	Sophomore Year Courses Level I Fieldwork	Junior Year Courses — — Level I Fieldwork	— — — — — — — — Level I Fieldwork	Senior Year Courses Level I Fieldwork Advanced Topics Special Studies
Fall 1989 Class 4				*acceptance into OT curriculum*	Sophomore Year Courses Level I Fieldwork	Junior Year Courses Level I Fieldwork

Forms were sent to 95 therapists. The respondents had three and a half to twenty years of experience as occupational therapists, and two to twelve years of experience practicing in a school setting. The therapists served between 1 and 30 schools each, and had from 12-90 students on their caseloads. (A comparison of the demographic data collected can be found in the Findings section, under Pilot Information).

Occupational Therapy Students. Students enrolled in the occupational therapy curriculum at the University of Kansas during the time period from Fall 1987 to Spring 1990 were asked to participate in data collection. Surveys were administered to students during their first and last semesters of academic study. Students who chose a MORE fieldwork site as a practicum experience also completed a set of surveys at the end of their nine months of fieldwork. Semester 1 students have received the least academic exposure, semester 4 the most, with fieldwork students having had an opportunity to apply their knowledge. Table B depicts the academic pattern of the student classes which participated.

Data Collection Methods

The evaluation activities include two main areas of focus: 1) to validate components of the rural training model, so interested parties will clearly understand use of the materials; and 2) to document specific changes in those persons and those environments participating in this project.

Measures Used. A variety of measures were used to evaluate changes in knowledge, attitudes, and value systems. Copies of these measures can be found in Appendices 2-13. Each measure is briefly outlined below:

Classroom Integration Questionnaire (CIQ) *Appendix 2* (Kaufman, Agard & Semmel, 1985). The CIQ presents the reader with vignettes of 25 children who are described as having primarily cognitive or behavioral problems. Vignettes describing children with physically handicapping conditions were added after the first year of the grant. The respondents were asked to indicate the appropriate classroom placement for each child. The five options are: 1) a regular classroom, 2) a regular classroom all day with supplemental materials, 3) a regular classroom part of the day with supplemental materials and advice, 4) a special class all day, or 5) not for public education.

Family Questionnaire (FQ) *Appendix 3* (Kaufman, Agard & Semmel, 1985). The family is asked to respond to 33 questions pertaining to family background, lifestyle, and experiences.

Attitudes Toward School-Based Services (ATSBS) *Appendix 4* (Gilfoyle, 1981). This survey contains 36 statements regarding school-based services. Respondents indicate the expressed level of agreement on a scale from -3 ("I disagree very much") to +3 ("I agree very much").

Occupational Therapy Needs Survey (OTNS) *Appendix 5*. This tool was developed by the MORE project staff. The survey includes demographic information, questions regarding roles, preservice training needs, challenges of service provision in educational settings, inservice topics, team members, resource and caseloads.

Pediatric Competencies (Comps 1 & 2) *Appendix 6*. These measurements were developed by the MORE project staff to assess knowledge gained by the preservice curriculum students, as they progressed through the program. Both tests are multiple choice and matching questions. Comp 1 is aimed at basic information provided to students in the early stage of their pediatric education. Comp 2 addresses more advanced knowledge acquired by the students.

SBS Inventory of Teacher Social Behavior Standards and Expectations Survey (SBS) *Appendix 7* (Walker & Rankin, 1980). The SBS addresses both adaptive and maladaptive behaviors that students exhibit, and asks for a judgment of the effects of these behaviors on their ability to interact with the student.

Student Fieldwork Evaluation (SFWE) *Appendix 8*. Students complete this document upon completion of the MORE fieldwork assignment. This form provides information to change and/or commend the fieldwork and academic programs. Students are encouraged to make concrete comments. The American Occupational Therapy Association (AOTA) revised the SFWE in 1988. The first group of fieldwork students used the older version, while the second group used the revised form. A copy of both versions is included in Appendix 8.

Fieldwork Performance Report (FWPR) *Appendix 9*. The fieldwork supervisors completed this form at the conclusion of the students fieldwork experience. Students were rated on a scale of 1 (poor) to 5 (excellent), in the areas of performance, judgment, and attitude in relationship to treatment, assessment, time management, and other areas of professional conduct.

Teacher Climate Control Questionnaire (TCCQ) *Appendix 10* (Kaufman, Agard & Semmel, 1985). The teacher is asked to respond to statements which identify the teacher's preferences of management in the classroom.

Teacher Educational Attitude Questionnaire (TEAQ) *Appendix 11* (Kaufman, Agard & Semmel, 1985). This identifies the teacher's attitudes about school and classroom issues. A corresponding questionnaire was sent to parents, the Parents Educational Attitude Questionnaire (PEAQ).

The Selected Children's Background Questionnaire (SCBQ) *Appendix 12* (Kaufman, Agard & Semmel, 1985). This 27 question form obtains information about the family's socioeconomic status and educational experiences.

The Rural Needs Survey (RNS) *Appendix 13*. This was designed by the MORE staff to gain information about strengths, needs, recruitment, and demographic issues, from the rural and urban sites who participated in this project.

Occupational Therapist General Information Questionnaire *Appendix 14*. This questionnaire provided demographic information from the practicing occupational therapists. An occupational therapy student created this form as part of a senior research project (see Impact of Project Findings).

Data Collection Process

All participants in the data collection process were given consent forms and an abstract of the grant (Appendices 15 & 16). Data was collected at the site at each participants' location. Specific recruitment techniques are discussed here.

The seven fieldwork site supervisors were each mailed a set of surveys to complete before their fieldwork student arrived. A self-addressed stamped envelope was included for return of the survey packet. The packet included the following set of surveys: Classroom Integration Questionnaire (CIQ), Attitudes Toward School Based Services (ATSBS), Occupational Therapy Needs Survey (OTNS), and Occupational Therapy General Information Questionnaire (Appendices 2,4,5,14).

Each fieldwork supervisor was asked to identify teachers, parents, and administrators of a student who was receiving occupational therapy services. In the initial data collection process, the surveys were mailed directly to these individuals with a self-addressed stamped envelope for their convenience. In the final data collection, the on-site supervisor was asked to dispense and retrieve the survey packets. This process was used to improve the return rate. The educators were asked to complete the CIQ, Teacher Climate Control Questionnaire, Teacher Educational Attitudes Questionnaire and the Rural Needs Survey (Appendices 2, 10, 11, 13).

The Teacher Educational Attitudes Questionnaire and the Rural Needs Survey (Appendices 11 & 13) were sent to the administrators. The parents were asked to complete the CIQ, Family Questionnaire, Parent Educational Attitude Questionnaire, and the Selected Children's Background Questionnaire (Appendices 2, 3, 11, 12).

In the solicitation of background data, notices were placed in Occupational Therapy newsletters and over the Special Net Bulletin Board in the states of Missouri, Kansas, Iowa, and Nebraska, seeking therapists practicing in both urban and rural school districts. Names of

Table C
Schedule of Class Participation in MORE Project

Spring 1986	Fall 1986	Spring 1987	Fall 1987 grant begins	Spring 1988	Fall 1988	Spring 1989	Fall 1989	Spring 1990 grant ends
		Class 1 Semester 1			Class 1 Semester 4		Class 1 completes fieldwork	
			Class 2 Semester 1			Class 2 Semester 4		Class 2 completes fieldwork
					Class 3 Semester 1			Class 3 Semester 4
							Class 4 Semester 1	Class 4 Semester 2
Baseline Semester 1			Baseline Semester 4					

school based therapists were also obtained from state departments of education. A total of 95 survey packets were sent. This packet was the same as the one sent to the fieldwork supervisors, many of whom participated in the initial data collection process.

Students enrolled in the Occupational Therapy curriculum at the University of Kansas Medical Center in Kansas City, Kansas participated in the data collection by answering the items on the CIQ and ATSBS as well as Pediatric Competency Exams I and II and the Inventory of Teacher Social Behavior: Standards and Expectations, Part 1 and 2 (Appendices 2, 4, 6, 7). The students responded to the surveys during homerooms, a class session or during a specifically designated time. Table C depicts the classes involved in the project, and Table D depicts the timeline for survey administration.

Table D
Timeline for Survey Administration

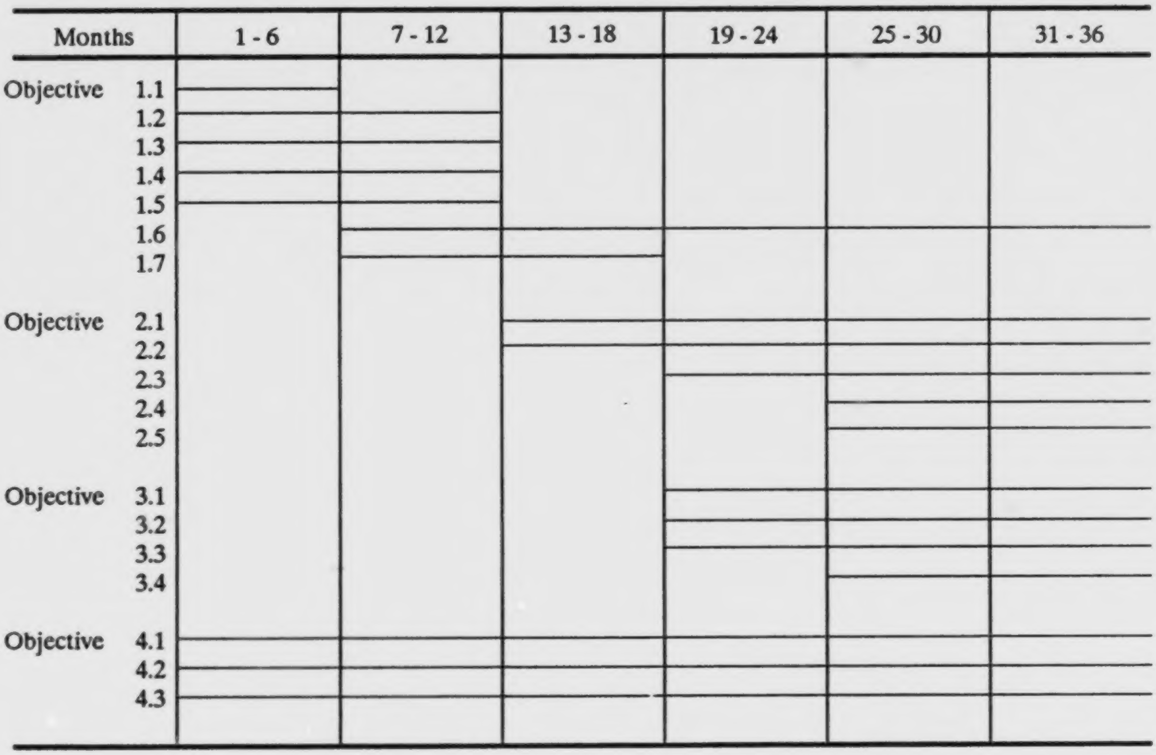
	0 - 6 months	7 - 12 months	13 - 18 months	19 - 24 months	25 - 30 months	31 - 36 months
Preservice Occupational Therapy Students Class 1	SBS CIQ ATSBS		SBS CIQ ATSBS Ped Comps		SBS FWE CIQ SFWE ATSBS Ped Comps (after rural fieldwork)	
Class 2	SBS CIQ ATSBS			SBS CIQ ATSBS Ped Comps		SBS FWE CIQ SFWE ATSBS Ped Comps (after rural fieldwork)
Class 3			SBS CIQ ATSBS Ped Comps			SBS CIQ ATSBS Ped Comps
Class 4					CIQ Ped Comps	
Pilot information Rural/Urban Occupational Therapy Personnel		OT General Info. OT Needs Survey ATSBS CIQ			OT Gen. Info. CIQ OTNS ATSBS (selected sites)	OT Gen. Info. CIQ OTNS ATSBS (selected sites)
Rural School Personnel		CIQ ATSBS TCCQ TEAQ Rural Needs Survey			CIQ ATSBS TCCQ Rural Needs TEAQ (selected sites)	CIQ ATSBS TCCQ Rural Needs TEAQ (selected sites)
Rural Families		CIQ PEAQ SCBQ FQ			CIQ FQ PEAQ SCBQ (selected sites)	CIQ FQ PEAQ SCBQ (selected sites)

SBS: SBS Inventory of Teachers Social Behavior Standards & Expectations
CIQ: Classroom Integration Questionnaire
ATSBS: Attitudes Toward School Based Services
Ped Comps: Pediatric Competencies 1 & 2
FWE: Fieldwork Education
SFWE: Student Fieldwork Education
TCCQ: Teacher Climate Control Questionnaire
TEAQ: Teacher Educational Attitude Questionnaire
Rural Needs: Rural Needs Survey
SCBQ: Selected Children's Background Questionnaire
FQ: Family Questionnaire
PEAQ: Parent Educational Attitude Questionnaire
OT Needs Survey: Occupational Therapy Needs Survey
OT Gen. Info: Occupational Therapy General Information

Sequence of Activities

Timeline for Project Goals and Objectives. The Occupational Therapy Curriculum at the University of Kansas has been preparing entry level occupational therapists since 1942. During this time, KU has provided a large portion of the occupational therapists who serve the midwest. Since a majority of the school districts in these states are located in rural settings, it is necessary for students who wish to work with children to have the skills necessary to provide effective services in a rural location. The MORE project was designed to develop a model training program to assist preservice occupational therapy students in developing these competencies that prepare them to work within the unique parameters of the rural public school. The implementation timeline is found in Table E.

Table E
Managing Occupational Therapy in Rural Education
Implementation Timeline



Goal 1: To develop and implement a model for training preservice occupational therapy students in specialized techniques and procedures that enable successful service provision in rural school settings.

Goal 2: To validate the rural training model by collecting and analyzing ongoing data from project staff, students, clinical, and fieldwork personnel.

Goal 3: To develop and implement a plan to disseminate and replicate the validated rural education training model for occupational therapists.

Goal 4: To administer the proposed occupational therapy preservice training project effectively.

Professional Education Timeline for OT Students. Occupational Therapy Students apply to the admissions committee for acceptance into the occupational therapy curriculum. They must carry a 2.5 or above grade point average, have completed four semesters of general education undergraduate work, and have spent 16 hours observing an occupational therapist at work.

Clinical observations and involvement are stressed throughout the curriculum. These experiences are called Level I and Level II Fieldwork. The four Level I fieldworks are done concurrently with academic studies. The three Level II Fieldworks are full-time experiences after completion of academic coursework (see Appendix 17 for Fieldwork course descriptions).

Fieldwork Plans for OT Students. In the original project proposal, it was anticipated that approximately 10% of each preservice class would choose designated rural fieldwork sites. Six students or 11% of Class 1 completed MORE fieldwork. Seven students or 11% of Class 2 were chosen for rural fieldwork assignments, with four completing their assignments. Pregnancy and fieldwork site cancellation account for this attrition.

A stipend of $100.00 per month was offered to the first year class, and a stipend of $250.00 per month was offered to the second year class to entice students to participate (other fieldworks with stipends were offering more money than the project was offering). Both classes received a mileage allowance of 20.5 cents a mile. Checks were sent monthly.

Table F shows sites chosen by the project staff as possible rural fieldwork placements. These sites: 1) met the criteria to qualify as "rural", serving school districts of 10,000 or less (Helge, 1984); 2) personnel showed an interest in supervising a student; and 3) the site agreed to cooperate in completion of the surveys.

Table F
M.O.R.E. Fieldwork Sites

*Geary County Public Schools
Junction City, Kansas

*Russell Center
Garden City, Kansas

*Leavenworth Public Schools
Leavenworth, Kansas

*Research Medical Center
Kansas City, Missouri

Three Lakes Educational Cooperative
Lyndon, Kansas

St. Louis County Special School District
St. Louis, Missouri

*St. John's Hospital
Salina, Kansas

Garden City Public Schools
Garden City, Kansas

*Ottawa Public Schools
Ottawa, Kansas

*Area 7 Education Agency
Cedar Falls, Iowa

Hutchinson Hospital
Hutchinson, Kansas

* *indicate sites where students were placed*

Evaluation Plan Timelines. The evaluation activities included in this project included two main areas of focus: 1) to validate all components of the rural training model, so that those interested in replicating it could clearly understand the requirements for successful use of the model; and 2) to document specific changes in those persons and those environments which participated in this project. Please refer to Table D for a pictorial representation of the process measures timeline.

FINDINGS

Pilot Information

The pilot information was solicited during the first year of the MORE project, in the fall of 1987. This section is a summary of the data collected from registered occupational therapists, as reported by Dunn and Gray (1988).

Of the 95 occupational therapy personnel surveyed, 29 (31%) responded at the end of a two month period. Nineteen (65%) of the respondents were identified as urban-based therapists, and 10 (14%) were identified as rural-based personnel.

Demographic information about the occupational therapy personnel is presented in Table G.

Table G
Occupational Therapy Personnel
Demographic Data

	Rural	Urban
Educational Background		
Bachelor of Science	10 (100%)	19 (100%)
Master of Science	4 (40%)	10 (53%)
Years in OT	3 1/2-18 years (Mean=10)	2-20 years (Mean=9.5)
Years in Pediatric OT	2-16 years (Mean=8)	2-13 years (Mean=8)
Years in Public Schools	2-11 years (Mean=6)	2-12 years (Mean=6)
Services Provided		
Number of Schools Served	1-22 (Mean=11)	1-30 (Mean=7)
Miles Traveled per week	0-325 (Mean=181)	0-125 (Mean=38)
Number of Children Served	23-90 (Mean=56)	12-60 (Mean=41)

As indicated in the table, the urban and rural personnel are relatively equal in educational background, years of practice in occupational therapy, years in pediatrics, and years practicing in public schools. However, differences were evident in the number of schools served, the number of miles traveled each week, and in the number of children served by each therapist.

All occupational therapy personnel returning their packets completed the OTNS. The participants listed their top five concerns in preservice training and needs in occupational therapy service provision in educational settings.

Table H lists the preservice content areas listed by rural and urban occupational therapy personnel.

Table H
Preservice Content Area Needs as Ranked by Occupational Therapists

Urban	Rural
Child development (37%)	Evaluation/interpretation (50%)
Communication skills (31%)	Advance sciences (40%)
Treatment techniques (31%)	Child development (40%)
Writing IEP (26%)	Program development (30%)
Advance sciences (26%)	Service delivery (30%)
Consultation skills (26%)	Communication (30%)
Evaluation/interpretation skills (26%)	Educational philosophy/aims (30%)

The areas noted by both groups as most important include advanced sciences, child development, communication skills, knowledge of educational philosophy and aims, evaluation and interpretation skills, and writing individualized educational program.

The respondents also listed needs of occupational therapy service provision in educational settings. Table I lists needs as stated by rural and urban personnel. As listed in the table, the top 3 needs for both groups are issues of service provision in terms of caseload size, time, space, and money; consultation skills; and continuing education resources. Many other areas of overlap existed, although each need had differing frequency from group to group.

The rural and the urban occupational therapy personnel completed the ATSBS (Appendix 4). Although respondents had 6 categories of choices (-3, -2, -1, +1, +2, +3) responses were grouped into negative (-3 -2), neutral (-1 +1), or positive (+2 +3) categories. Data was coded so that negative responses reflected a more narrow, less inclusive view. Responses were summarized by grouping items into five content areas (not all items were included in these groupings). Figure 1 summarizes the results of five content areas used for summary and analysis; students beginning the occupational therapy curriculum were compared to the rural and urban therapists. Since this analysis was completed during the first year of the MORE project, data for students farther along in their education was not yet available.

Table I
Needs in Occupational Therapy Service Delivery in Educational Settings as Ranked by Occupational Therapists

Urban	Rural
Consultation skills (42%)	Caseload/space (100%)
Caseload/time/schedule (37%)	Consultation (40%)
Money (37%)	Continuing education resources (40%)
Continuing education resources (32%)	Prioritizing/criteria (30%)
Differentiating educational/medical model (26%)	Service Delivery (21%)
Service delivery (20%)	Differentiating medical/educational model (20%)
Treatment planning skills (16%)	Function as team member (20%)
Establishing academically relevant goals (16%)	Use of aides (paraprofessional/COTA) (20%)
Function as team members (16%)	Efficient documentation (20%)
Use of aides (paraprofessional/COTA) (16%)	Treatment planning (10%)
Educating about OT (16%)	Establishing academically relevant goals (10%)
Efficient documentation (16%)	Monitoring students (10%)
Early intervention (11%)	Student preparation (10%)
Student preparation (11%)	Support for single OT (10%)
Assessment tools (5%)	
Advocacy role (5%)	

Percentage groupings were essentially the same across the groups. Three items had less than a 20% difference in response patterns across groups: 15 items showed a 20-30% difference: 7 items showed a 30-40% difference: 7 items showed a 40-50% difference: and 4 items showed a 50% or more difference. Figure 2 presents the pattern of differences for the 4 items with more than 50% difference. The most striking finding was the large negative response by students and rural therapists on item number ten. They reported that they felt occupational therapy does have more to offer younger children, when this should not be the case. Perhaps the urban therapists had more experience dealing with older students and therefore recognized the occupational therapy contribution that can be made.

Figure 1

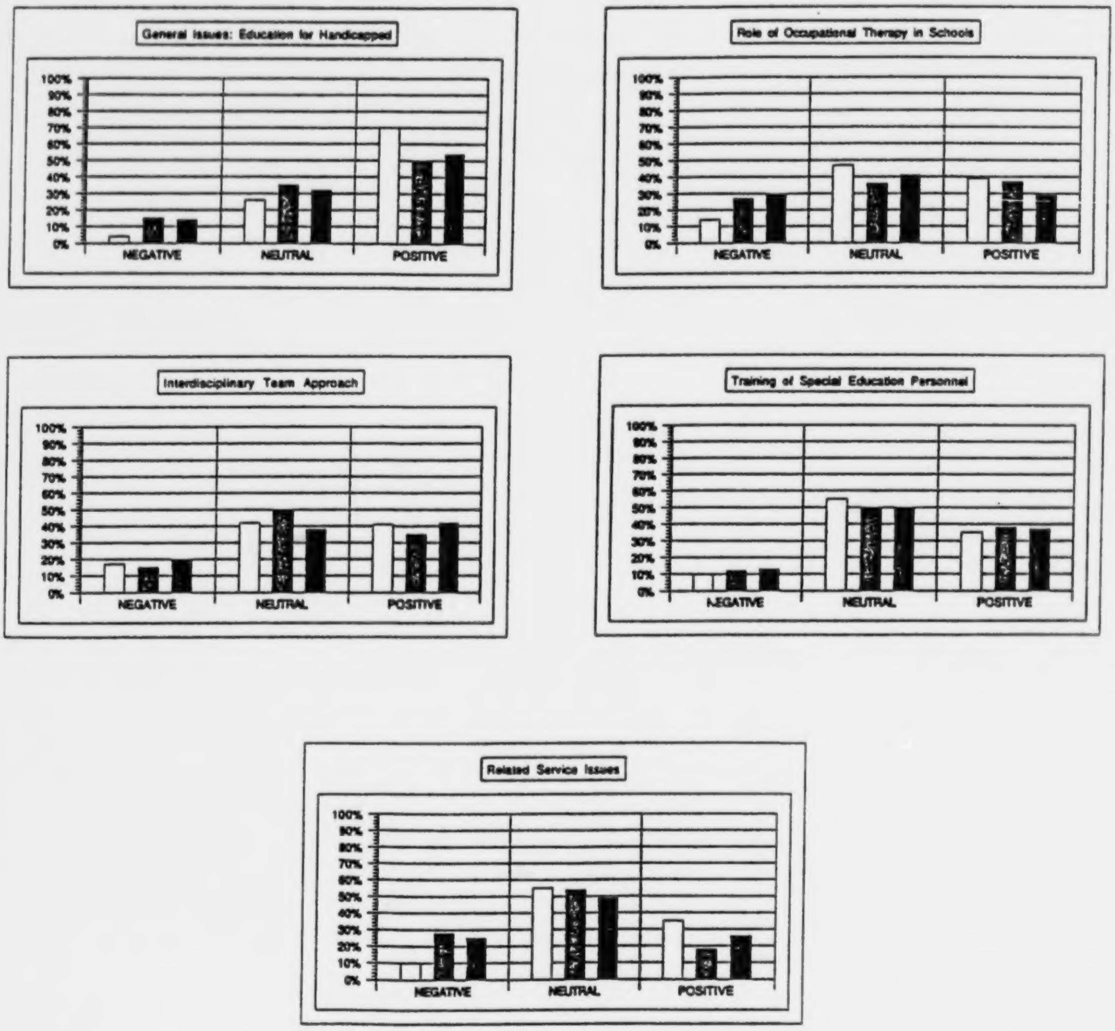
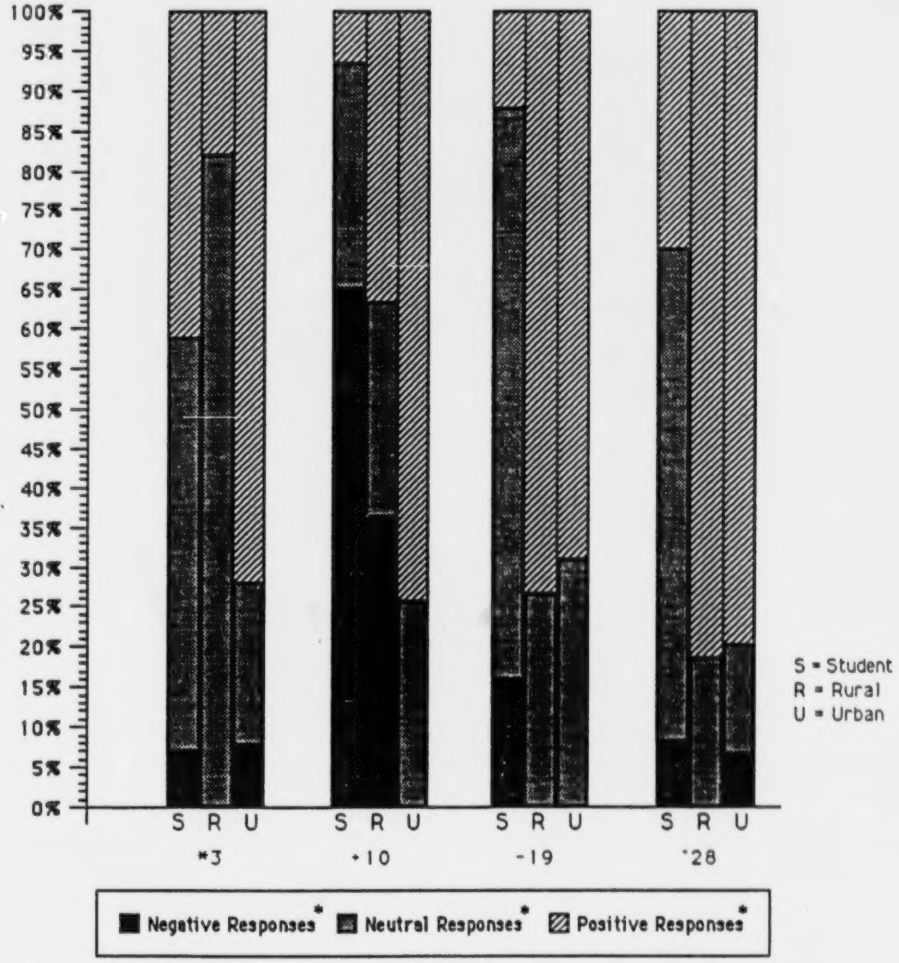

General Issues: Education for Handicapped
Role of Occupational Therapy in Schools
Interdisciplinary Team Approach
Training of Special Education Personnel
Related Service Issues
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
NEGATIVE
NEUTRAL
POSITIVE

Figure 2



*3 Teachers in regular classroom programs are not prepared to have handicapped students placed in their classroom.
+10 Occupational therapy has more to offer pre-school and early primary school-aged students than to students enrolled in secondary educational programs.
-19 Teachers do not understand the basic principles of sensory-motor development.
^28 Regular classroom teachers have little knowledge of occupational therapy service.

* A response was considered negative if it reflected a more narrow or less inclusive view; therefore, for each of these questions a "yes" response was considered negative.

☐ OT Students ▩ OT Personnel- Rural ■ OT Personnel- Urban

The CIQ (Appendix 2) has items describing children who have cognitive problems (N=11) and children who have behavior problems (N=12). Two items described children with both cognitive and behavior problems. Percent of responses to each level of classroom placement were plotted for the 25 items. Visual inspection revealed that 22 items had very similar patterns of choices across the therapist groups, most frequently choosing mainstreamed with special classroom help, resources room and special class placement. The three items that generated significantly different patterns of response were vignettes about children with cognitive difficulties; they could not follow instructions and needed concrete directions and materials.

Classroom Integration Questionnaire (CIQ) Results

On this questionnaire the students were asked to respond to vignettes describing children with a behavioral cognitive, or physically handicapping condition. The students were asked to indicate one of five classroom placement options for the child being described.

A. In regular classroom
B. In regular classroom all day with supplemental materials and advice
C. In regular classroom part of the day with supplemental materials and advice
D. In special class all day
E. Not for public education

The three categories on the CIQ, Physical, Cognitive and Behavioral conditions, will be discussed separately. As with other analyses, data are collapsed across like points in time (e.g., all semester 1 students' data) to demonstrate potential trends across time.

Figure 3 presents data on the Physical category. Students in semester 1, 4 and fieldwork are compared to OTR's, parents and educators. It is encouraging to see that very few persons in any category responded that the children represented in the vignettes should be isolated in a segregated program (response D:10-15%) or outside of public education (response E:0-5%). There was also a low number of persons who responded that these children should be placed in self-contained special education classrooms (response C:10-17%), which has been a common practice in the past. The majority of all respondents in each group said that children with physical disabilities should be placed in regular education, with or without resource assistance. This finding suggests that students, parents and professionals are willing to consider integrated settings for children with physical disabilities.

The occupational therapists had a much stronger tendency to choose resource support over regular education placement without this support (65% compared to 9% respectively).

Perhaps this reflects their awareness that occupational therapists have a significant role in making these placements successful; task and environmental adaptations can give a child with physical disabilities access to age appropriate life and learning experiences.

Figure 3

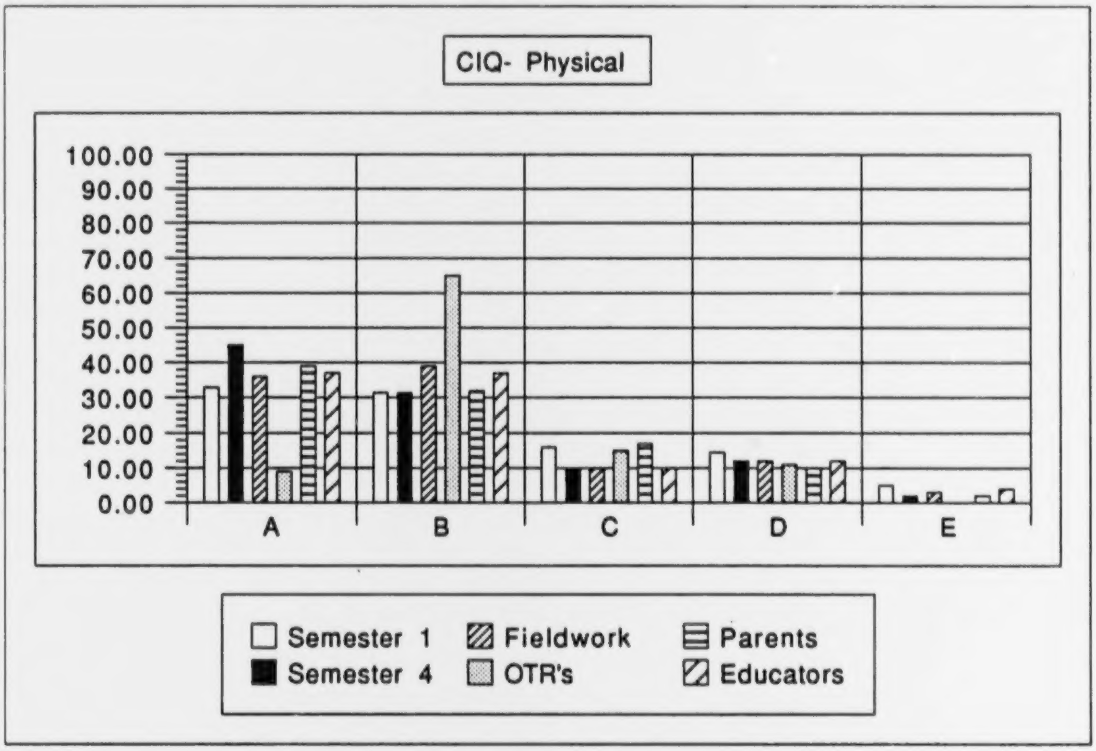


Figure 4 displays the data for the same groups in relation to the Cognitive category. In this instance, students, parents and professionals tended not to select the extreme choices. Almost no one (0-3%) said these children could not be placed in some public educaton program; few persons (0-12%) said these children could function in a regular education program without resource support either. Most considered that these children would require professional support to function within the schools.

The fieldwork students and parents were in most agreement that children with cognitive disabilities could function in a regular classroom with resource assistance (43% each). The occupational therapists were least willing to select this option.

The occupational therapists and educators were in most agreement that children with cognitive disabilities should be placed in self-contained classrooms (52% and 45% respectively). Perhaps they reported this because this is the most common pattern of service provision for children with cognitive disabilities in the public schools.

Figure 4

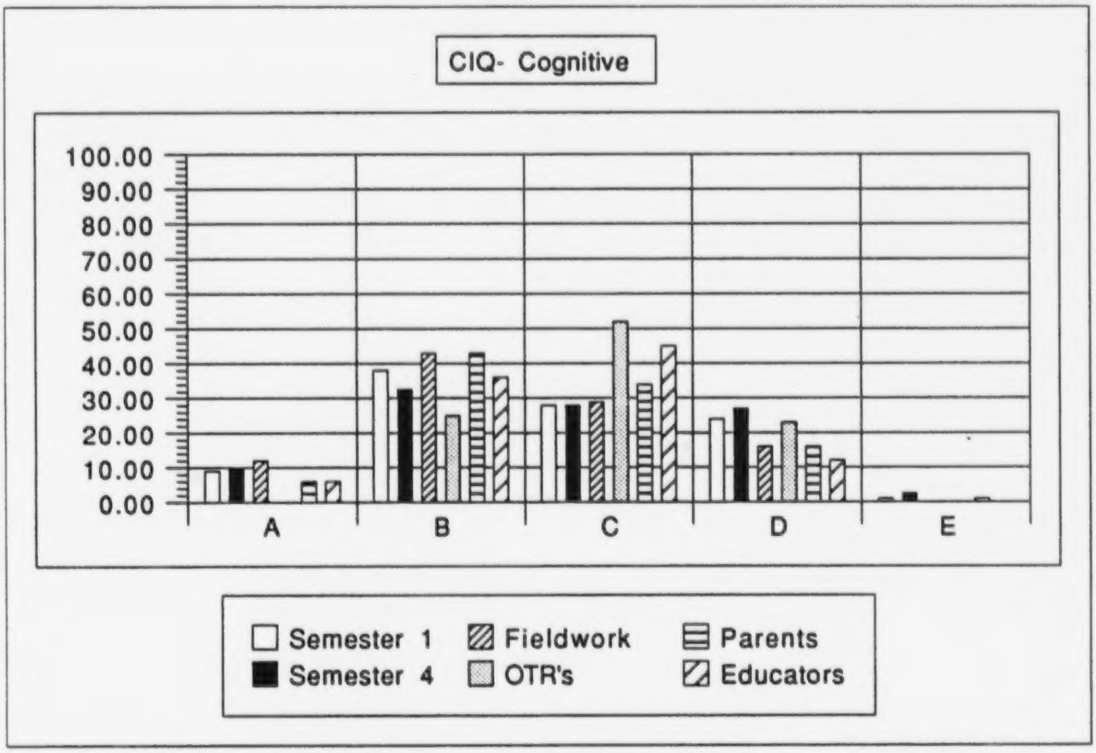
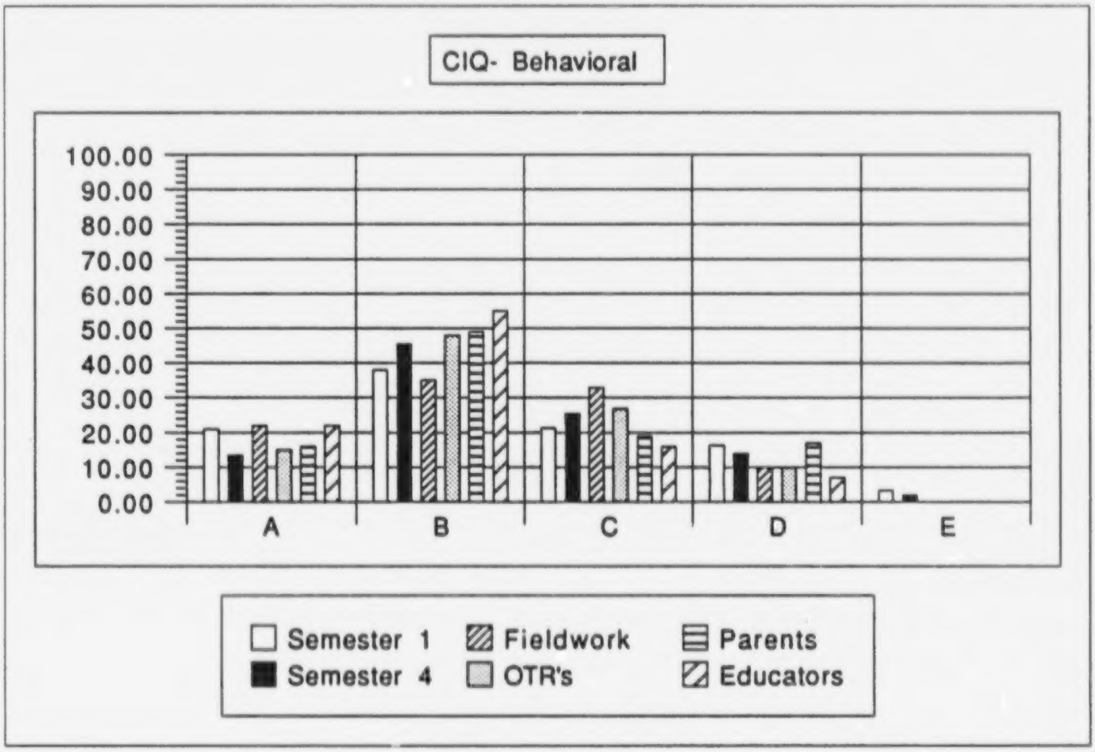


Figure 5 presents the data for the same groups in relation to the Behavioral category. Students in their academic preparation were the only groups (semester 1 and 4) who had anyone willing to segregate these children outside of public education (2-3%). Those students who completed a rural school-based fieldwork, other professionals and parents did not select this option. Only a few persons selected a segregated classroom (10-17%); the parents and the semester 1 students were most likely to select this option.

Approximately one fifth of persons across the groups selected regular education for children with behavioral disabilities. Students and educators were most likely to select this option.

Most persons in all groups selected the resources or self-contained classroom option for these children. Semester 4 students, the professionals and the parents were all most willing to select regular education with resource assistance (46-55%), which is also a common option in education presently. Fieldwork students were less willing to select this option. Their school-based experiences introduced them to children of all types; a major issue for a student on a pediatric fieldwork experience is learning to manage the children's behaviors, whether they have behavioral concerns or not. Perhaps this difference is related to their heightened awareness of the magnitude of this issue, without the commensurate skill development to manage the children as effectively as others.

Figure 5



Attitudes Toward School Based Services (ATSBS) Responses

The ATSBS (Appendix 4) was completed by preservice occupational therapy students and by registered occupational therapists. Some of the items on this questionnaire are worded in a negative or restrictive manner, so that a positive response would indicate a negative attitude. In these instances, the data were transformed so that negative responses in the analyses represent negative or restrictive attitudes. For data analysis, the items were divided into five categories:

Figure 6a **General Education for the Handicapped** *(questions 1, 4, 6, 13, 33)*
Figure 6b **Occupational Therapy's Role** *(questions 10, 12, 18, 26, 32)*
Figure 6c **Interdisciplinary Team Work** *(questions 2, 5, 15, 21, 22, 34)*
Figure 6d **Training of Special Educators** *(questions 3, 7, 19, 24, 25, 28)*
Figure 6e **Related Service Issues** *(questions 8, 11, 14, 20, 23, 27, 29, 30, 35, 36)*

Although the respondents had 6 response choices (-3, -2, -1, +1, +2, +3), for purposes of analysis responses were grouped into negative (-3, -2), neutral (-1, +1) or positive (+2, +3) categories. More restrictive and less inclusive attitudes were coded as negative in all cases.

Percentage groupings between students at the beginning and end of their academic training were essentially the same in all categories when comparing the negative, neutral, & positive responses. Fieldwork students choose the neutral category most frequently in all categories except "General Education for the Handicapped". In this category the negative response was chosen most frequently. The underclassmen followed this same pattern of choices as the fieldwork students did with a similarity rate of 83-90%.

As students moved through their academic preparation, they slowly approached the attitudes of the occupational therapists on the General Education for the Handicapped category. Many of these items are worded so that more restricted attitudes would receive a positive rating; during analysis these item scores were adjusted so that positive ratings would reflect more expansive attitudes. For example, item 4: "Because the law mandates occupational/physical therapy services, school administrators have negative feelings towards therapists", is better answered with a negative response, indicating that persons believe that this is not true. It is somewhat discouraging to see that occupational therapists reported more negative attitudes in this category.

It appears that students continue to have more neutral attitudes about Occupational Therapy's Role throughout their educational experiences. The occupational therapists responded with much fewer neutral responses than the students in this category, perhaps indicating that their experiences have led them to more distinct feelings about their roles within educational settings. The fieldwork students were also more negative than the occupational therapists about their professional role, perhaps indicating their continuing apprehensiveness with their roles in the schools.

The students continued to report more neutral and positive attitudes about Interdisciplinary Teamwork throughout their schooling when compared to practicing occupational therapists. This area has been emphasized very strongly throughout their educational experiences. Occupational therapists who are practicing in the schools presently did not have this emphasis when they were receiving their preservice education; their experiences emphasized a more clinical, less interactive approach to service provision. Additionally, therapists working in rural school settings have less opportunities to participate in team activities because of the distances among schools. Perhaps these students will bring a new perspective to rural school service provision, and will affect change in the system which supports service provision activities. One of the students who participated in the rural fieldwork has already been instrumental in affecting change (toward more interdisciplinary and integrated services) in the school which employs her.

Although the students reported a similar amount of negative attitudes as the occupational therapists on the Training of Special Education items, the occupational therapists had more positive attitudes than the students. This difference might also be associated with the students' lack of experiences with these professionals.

In regard to the Related Service Issues items, the students became more clear and more positive in their attitudes as they gained more knowledge and experiences. The pattern of fieldwork students and occupational therapists is identical in this pilot sample. It is encouraging to see that related service issues are primarily viewed as positive by the occupational therapists, and that the students are able to gain this profile as well.

We also compared semester 1 to semester 4 responses across the three classes who participated in the MORE Project. Only Class 3 obtained the benefit of all the MORE materials, since they were being created and revised throughout the project. No differences were noted among the classes on General Education for the Handicapped, and Occupational Therapy's Role. The students in Class 3 changed to more neutral and positive responses by semester 4 than other classes on Training of Special Education, Interdisciplinary Teamwork, and Related Service Issues.

Figure 6a

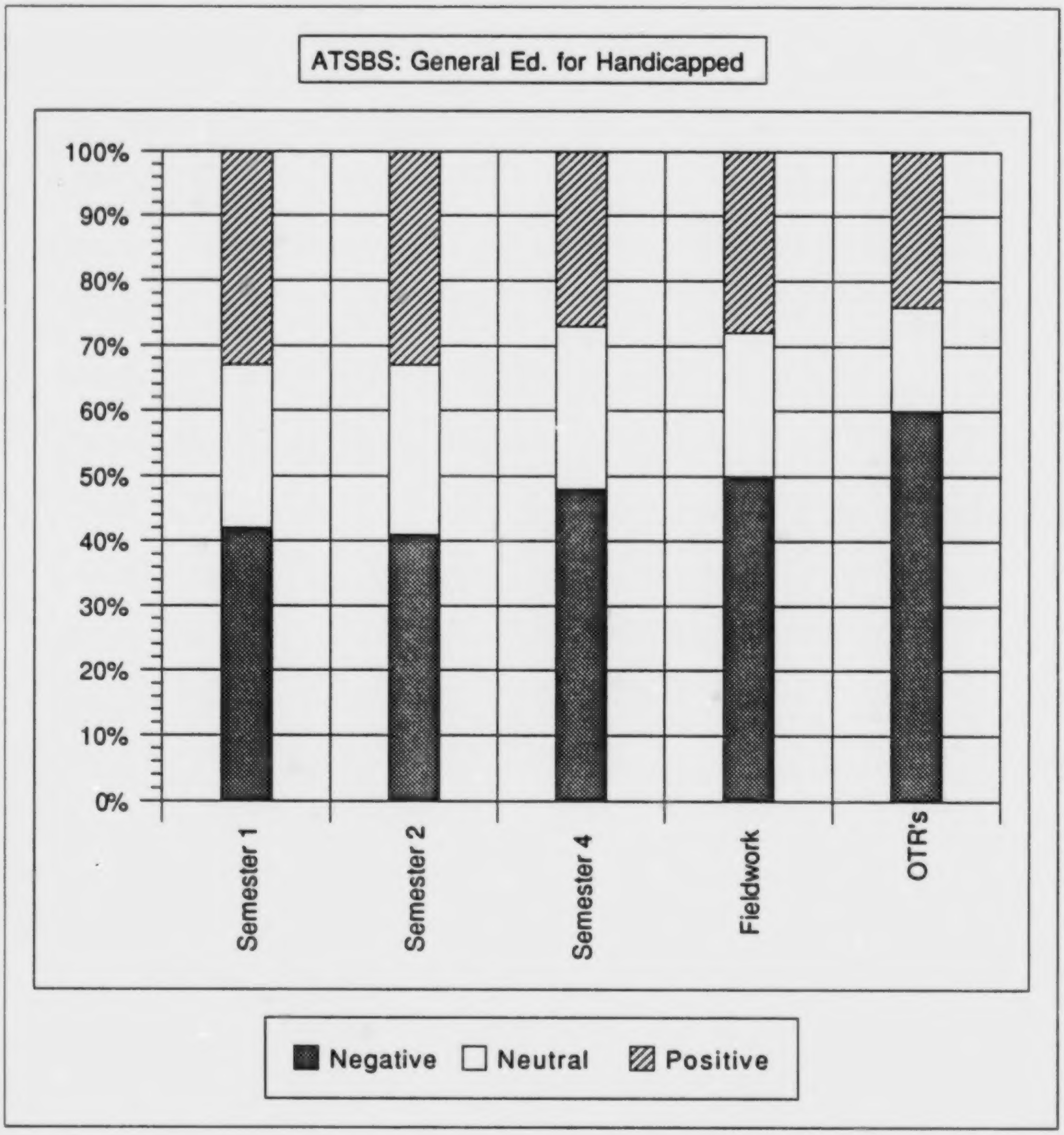

ATSBS: General Ed. for Handicapped
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
OTR's
Negative
Neutral
Positive

Figure 6b

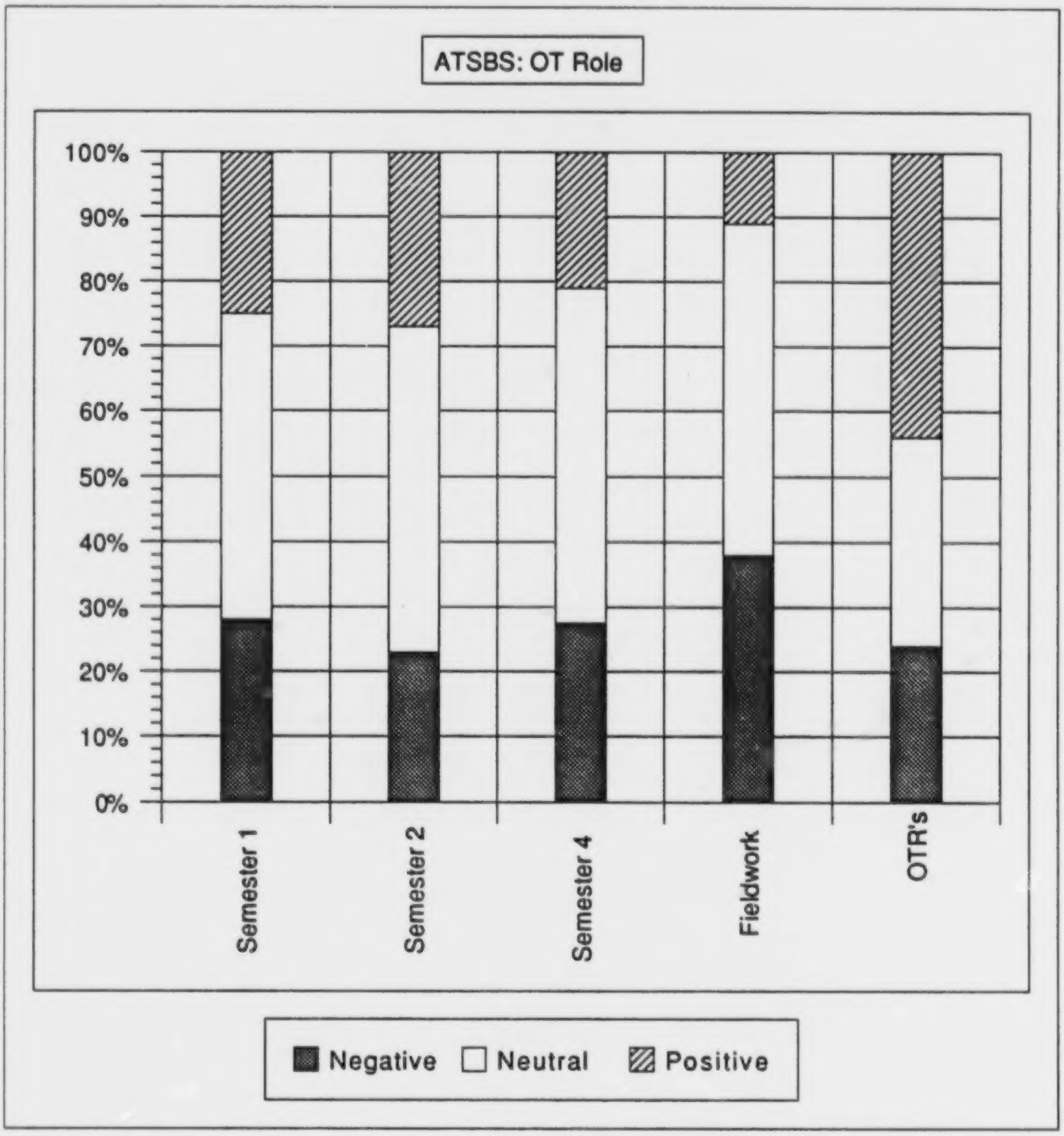

ATSBS: OT Role
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
OTR's
Negative
Neutral
Positive

Figure 6c

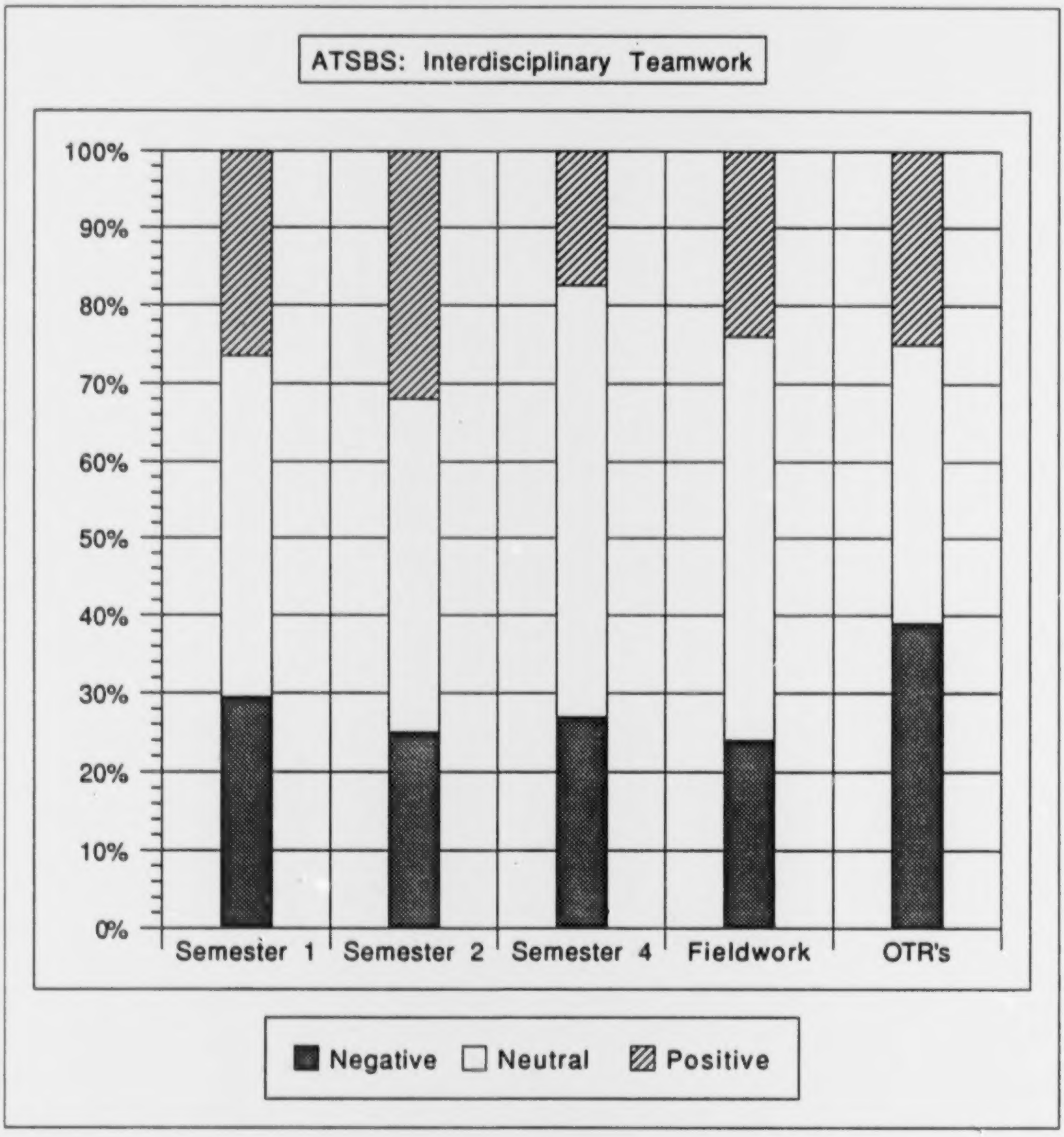

ATSBS: Interdisciplinary Teamwork
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
OTR's
Negative
Neutral
Positive

Figure 6d

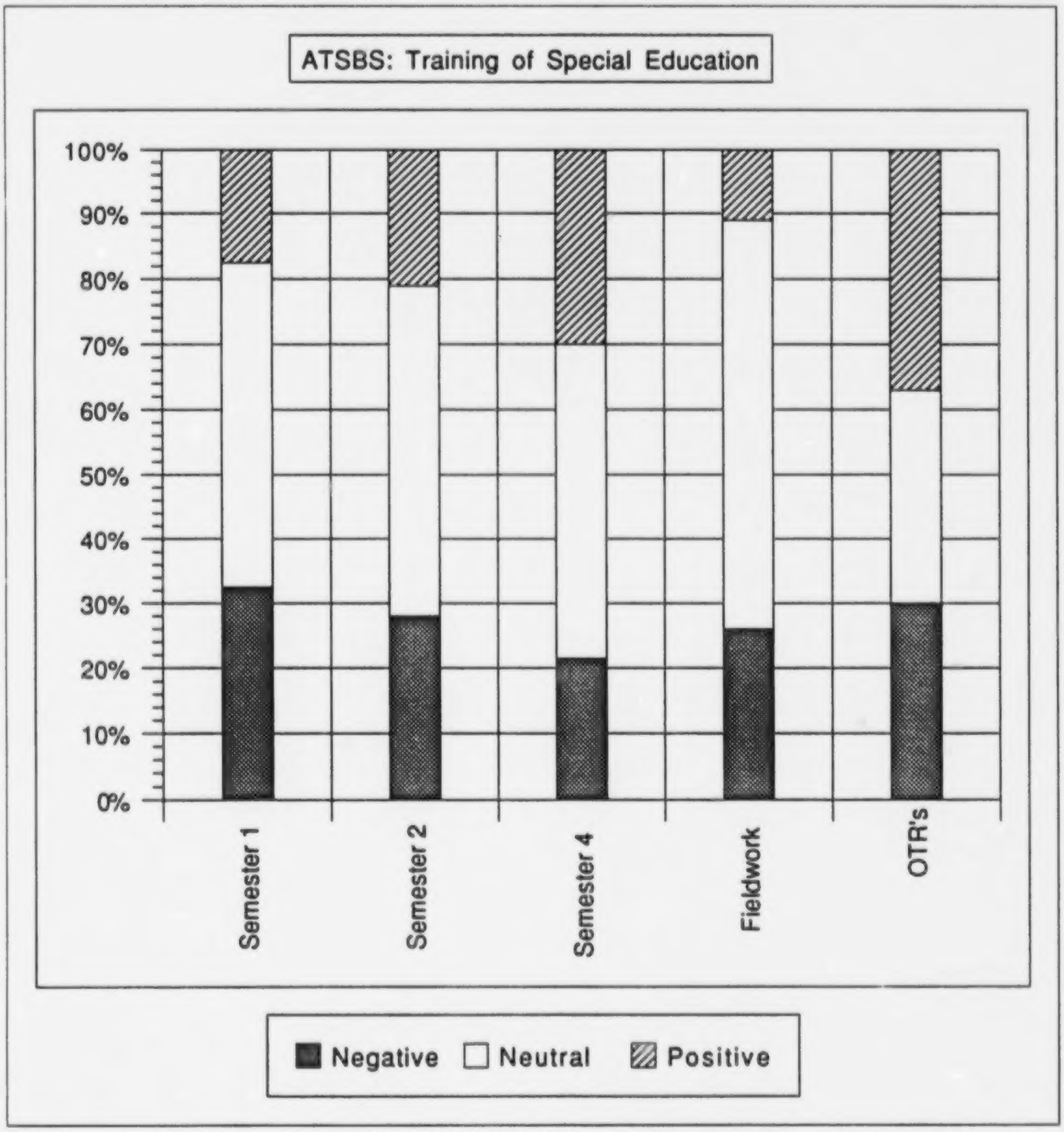
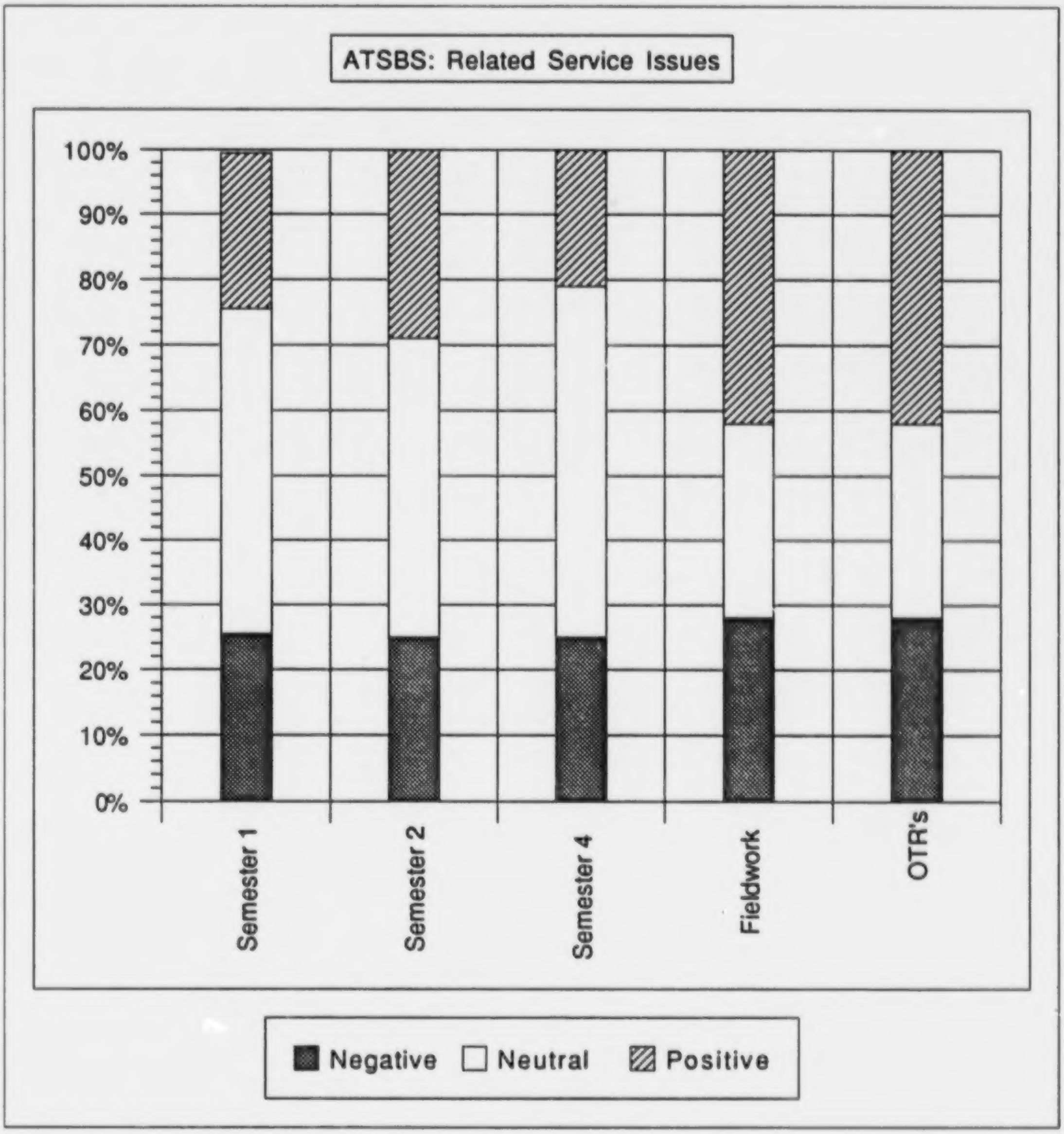

ATSBS: Training of Special Education
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
OTR's
■ Negative
☐ Neutral
▨ Positive

Figure 6e


ATSBS: Related Service Issues
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
OTR's
Negative
Neutral
Positive

Competency Exams Responses

The Pediatric Competencies (Appendix 6) were developed by the pediatric faculty at KU. These competencies were designed to assess the occupational therapy student's general knowledge about pediatric issues. The Competency I addresses basic information provided to entry-level students in the curriculum such as developmental milestones, the sensory systems, reflexes, and developmental theorists. Competency II reflects information taught in the last semester of undergraduate classroom study. This questionnaire looks at issues about federal regulations, individualized educational plans, assessment, treatment, diagnosis and service provision.

Students demonstrated improvements in knowledge across their preservice educational experiences on the Competency tests. Data across classes has been collapsed for these figures in order to demonstrate trends; actual within class comparisons are limited due to the length of the grant. Within class comparisons are reported in the text when they were possible.

Approximately half of Class 1, nearly three quarters (73%) of Classes 2 and 3, and 100% of Class 4 completed Competency exams. All of the fieldwork students (n=10) completed the exams after their fieldwork experiences.

Competency I

The Competency I (Appendix 6) consists of 25 multiple choice questions. The questions were grouped into five similar areas of content for purposes of analysis. The content areas were established by a group of six pediatric occupational therapists. Each therapist was given a copy of the competencies, with instructions to assign each question to the one content group which they felt best fit the question.

Content areas created were as follows: Motor Skills Acquired in Development (Acquired), The Sensory Systems (Sensory), Developmental Theorists (Theorists), Physical Maturation (Physical), Reflex Integration (Reflex), and Newborn. The Acquired content area includes items which asked what ages specific speech, and motor skills develop. The Sensory content area questions the student's knowledge of the function of the visual, auditory and tactile sensory systems. The originators of theories of genetic, cognitive and psychological development are included in the Theorists category. The Physical category addresses growth and body changes, and the Reflex category asks about reflexes that are commonly assessed. There was a 90 - 100%

agreement on all but one question, on which there was 50% agreement (number 24). The content areas that caused the split decision (newborn and physical) were combined into one category (Physical) and the category of "newborn" was dropped at this point, due to a low response rate by the pediatric occupational therapists. Competency I was also modified from 25 to 24 questions in the final analysis with the exclusion of question number 13 which read:

> Hand dominance usually occurs around
> a. 3-4 years
> b. 4-5 years
> c. 5-6 years
> d. 7-8 years

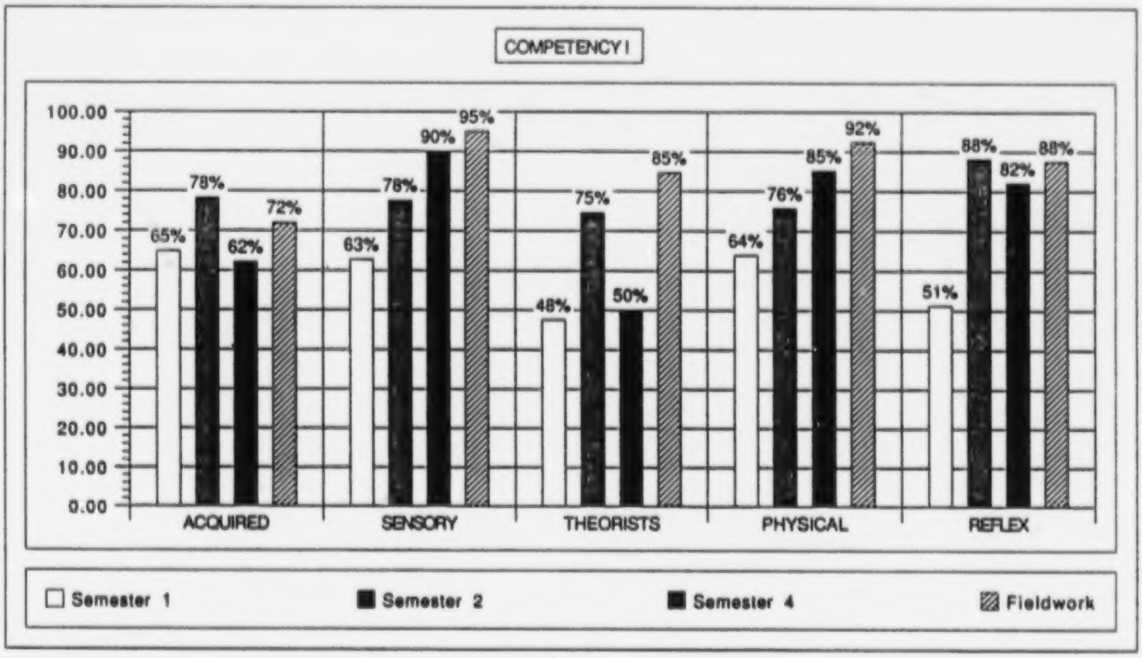
It was determined that this question was not an accurate reflection of the students' knowledge, as the average accuracy rate of responses of all was 23%. The five content areas consist of the following questions:

Acquired *(questions 1, 3, 16, 17, 19)*
Sensory *(questions 2, 4, 5, 6, 7, 12)*
Theorists *(questions 8, 9, 10, 11)*
Physical *(questions 15, 18, 24, 25)*
Reflex *(questions 20, 21, 22, 23)*

Figure 7 illustrates the general trend of increased knowledge from the first semester through fieldwork on the Competency I test. The Sensory, Physical and Reflex categories show consistent growth across the preservice preparation. These topics are not only taught in the first semester course on development, but are also reinforced in other courses throughout the curriculum. It is likely that students obtained information about these categories, and then were challenged to use the information in other contexts over their preservice educational experiences. Those who had a rural school-based pediatric fieldwork experience also retained this information after their fieldwork experiences.

The Acquired and Theorists categories contained content specific to the developmental coursework. In examining the graphs, one can see that students gained knowledge immediately after the semester 1 course, but lost some of this knowledge after the fourth semester. Without using this knowledge, they had a tendency to lose the specific details required on test questions. It is interesting to note that students who had a rural school-based pediatric fieldwork experience increased their overall scores in these two categories.

Figure 7



There were some differences between classes. The Physical and Reflex pretest scores may be somewhat inflated. Scores reported on the graphs are averages across appropriate class groups (e.g., all semester 1 classes) to demonstrate general trends. There were some differences between particular classes in these data sets. For example, there were two classes in the semester 1 group (fall 88 and fall 89). Their pretest scores on the Competency I test were similar for the Acquired, Sensory and Theorists categories (within 5%). They were markedly different on the Physical (37% difference) and Reflex (32% difference) categories. The class with higher scores took the pretest after the semester had begun (in first three weeks) and these topics were first on the course schedule. They may have gained some of this knowledge from early reading and initial content. Therefore, actual pretest scores may have been lower. In the semester 4 group (also two classes: spring 89 and spring 90), the Physical and Reflex categories were similar, while there were differences in the Acquired (18% difference), Sensory (12% difference) and Theorists (26% difference).

Within class comparisons revealed that students gained knowledge from semester 1 to semester 2 no matter what the pretest baseline score was (average of 29% gain across categories). Less gains were noted from semester 1 to semester 4 (average of 12% gain on four categories; Acquired category went down in this comparison). This test addressed knowledge from the semester 1 development course, so the time between coursework and the semester 4 posttest may be a factor in this difference.

Competency II

The Competency II (Appendix 6) consists of 46 multiple choice questions. For analysis purposes these questions were also similarly grouped into six content areas: Regulations Affecting School Systems (Regulations), Characteristics of Special Needs Students (Characteristics), Service Provision Options (Service Provision), Specific Diagnosis (Diagnosis), Treatment Approach (Treatment), Assessment Battery (Assessment), and Classification of Diagnostic Traits (Classification). The content areas were determined by a group of six pediatric occupational therapists by the same process that was used to categorize the Competency I questions. There was 90 - 100% agreement on category placement of all items except for question number 15 on which there was 50% agreement. In checking with the experts it was decided that the Classification and Characteristics categories were difficult to distinguish. The Classification category was dropped and questions were placed under the category 'Characteristics' because of the similarity of the questions.

Regulations items address issues such as public laws affecting special education and school districts requirements. Characteristic items address behaviors classically associated with a specific syndrome or educationally defined group of students. Service Provision addresses different models of service provision which would be used by an occupational therapist in a school setting.

Under the Diagnosis, Treatment, and Assessment questions (number 20-46), vignettes about children with special needs are presented. The student must then indicate the presenting diagnosis, choose an appropriate battery of assessments, and an effective treatment approach. The Competency II content areas consist of the following questions:

Regulations *(questions 1, 2, 3, 4, 5, 6, 7)*
Characteristics *(questions 8, 9, 10, 11, 12, 13, 14, 15, 16)*
Service Provision *(questions 17, 18, 19)*
Diagnosis *(questions 20, 23, 26, 29, 32, 35, 38, 44)*
Treatment *(questions 21, 24, 27, 36, 39, 45)*
Assessment *(questions 22, 25, 28, 31, 34, 40, 46)*

When the raw data on this section was reviewed, it showed that the students' answers corresponded with each other, as well as a small group of practicing pediatric occupational therapists, and yet these answers were not in agreement with the keyed choices. However, the pediatric therapists agreed on alternate choices as viable treatment and assessment options, as there are circumstances in which more than one approach could be appropriate. In the final data analysis six questions were eliminated (number 30, 33, 37, 41, 42, and 43) because there was not a consensus as to the "best" answer. Seven questions (number 21, 25, 27, 35, 39, 45, and 46) were keyed to accept two answers. These changes reflected a more accurate picture that is consistent with the response of practicing therapists, and is supported by the course examinations taken by the students during their final pediatric class. (note: These examinations show a strong knowledge base in both assessment and treatment options. Students are required to demonstrate their ability to administer two pediatric evaluations and show recognition/recall of six other evaluations.) Fieldwork students were also rated well by their supervisors on the Fieldwork Performance Report in these areas. All students were rated from 3-5 (good to excellent) on a scale from 1-5 by their supervisors. Comments made by supervisors included: "Knowledge of treatment and theory a strength... " and "assessment is an area of strength. .."

Figure 8 displays overall growth in knowledge on the Competency II test. The content for this test is taught primarily in semester 4, so one would expect the semester 1 and semester 2 scores to be lower and more similar, with knowledge gained at the end of semester 4 and in fieldwork. The Characteristics, Service Provision and Diagnosis categories follow this pattern.

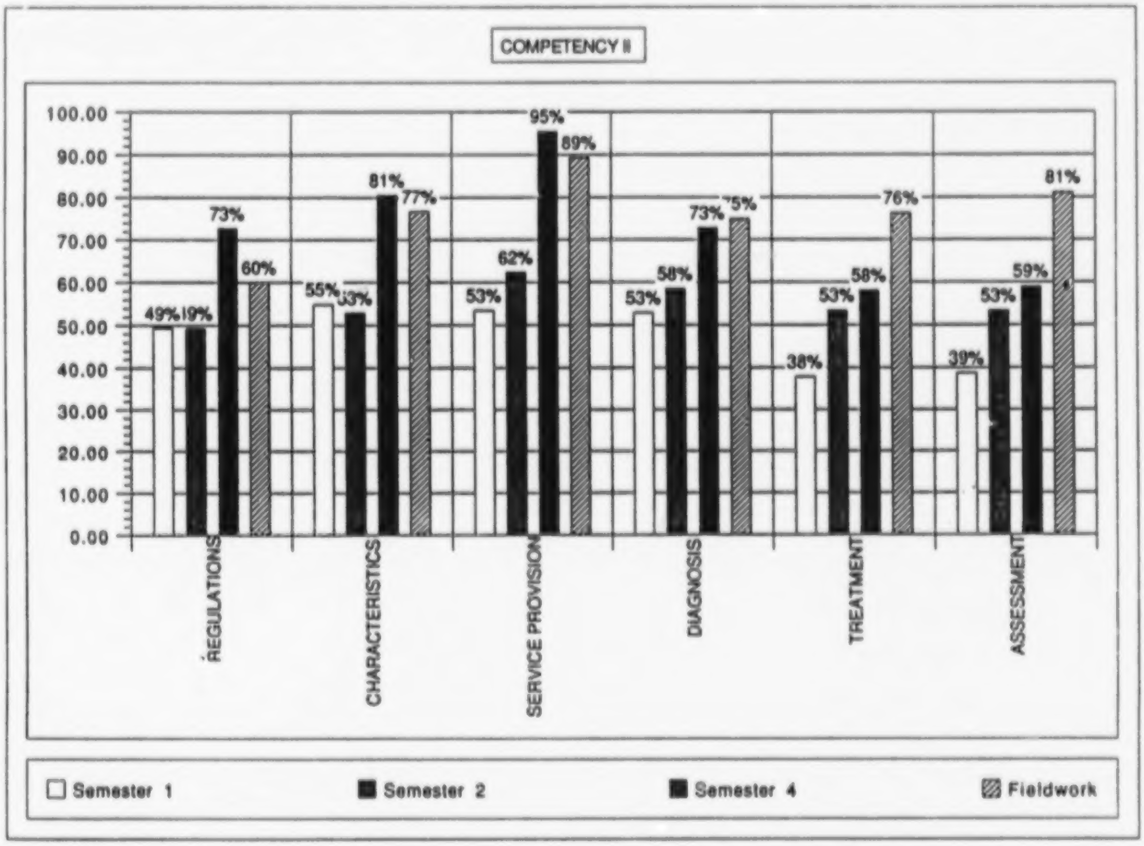
There were two categories (Treatment and Assessment) that showed the largest gains after the rural school-based fieldwork experiences. Perhaps the actual experience of providing these services is more beneficial to learning than the simulations that are provided in the academic program.

The Regulations category showed the expected pattern of similar performance in semester 1 and 2, with an increase after semester 4. However, students who had a rural school-based fieldwork did not retain this level of knowledge. Perhaps the specific information about the regulations was not stressed in the fieldwork experiences; this may need more emphasis when guiding potential fieldwork supervisors, since knowledge of regulations is important to effective school-based practice.

On the Competency II test, the groups were similar (within 12%) at semester 1 on all but two categories. Regulations category had a 21% difference and Diagnosis had a 16% difference between the two classes. It is unclear why the classes had these differences. In semester 4, both classes were within 14% of each other.

Within class comparisons revealed that each class made gains from semester 1 to semester 4 in all areas (average of 23% gain across categories).

Figure 8



SBS Responses

Responses on the SBS Part I (Appendix 7) were analyzed first by grouping items into four content areas: Cooperation with Teacher and Peers (Cooperation), Independent Work Skills (Independence), Effective Communication Skills (Communication), and Ability to Attend (Attention). Communication items address issues such as speaking clearly and appropriately. Independence addresses work/study/time management behaviors. Cooperation addresses following rules, sharing materials, participating with group processes, and Attention includes listening and concentration skills.

The SBS part II was eliminated from the final data analysis. This section addressed maladaptive behaviors, ranking them as "Unacceptable", "Tolerated", and "Acceptable". A group of specialists could not concur on like grouping of these items for purposes of analysis.

Figure 9 summarizes the findings from the SBS Inventory of Teacher Social Behavior Standards and Expectations (SBS). Only undergraduate preservice occupational therapy students completed this particular questionaire.

Figure 9a **Cooperation** *(questions 1, 4, 7, 13, 16, 17, 19, 20, 25, 27, 36, 39, 56)*
Figure 9b **Communication** *(questions 2, 3, 6, 9, 14, 18, 22, 23, 30, 33, 38, 41, 43, 45, 46, 47, 52, 55)*
Figure 9c **Independence** *(questions 5, 8, 11, 15, 21, 26, 32, 34, 35, 40, 42, 48, 49, 50, 54)*
Figure 9d **Attention** *(questions 10, 12, 28, 29, 37, 53)*

The Cooperation group yielded a slightly upward shift in the critical ratings across the educational experiences. The Independence group displays a slight decrease in the unimportant ratings as the students proceeded through the curriculum. On the Attention items, the students increasingly rated behaviors as more critical; no items were listed as unimportant during the Fieldwork experiences. Perhaps as students gained clinical knowledge and experience and were given more direct responsibility for intervention, the issues of cooperation, independence and attention became more apparent to them. There were no apparent changes in the Communication group of items.

Figure 9a

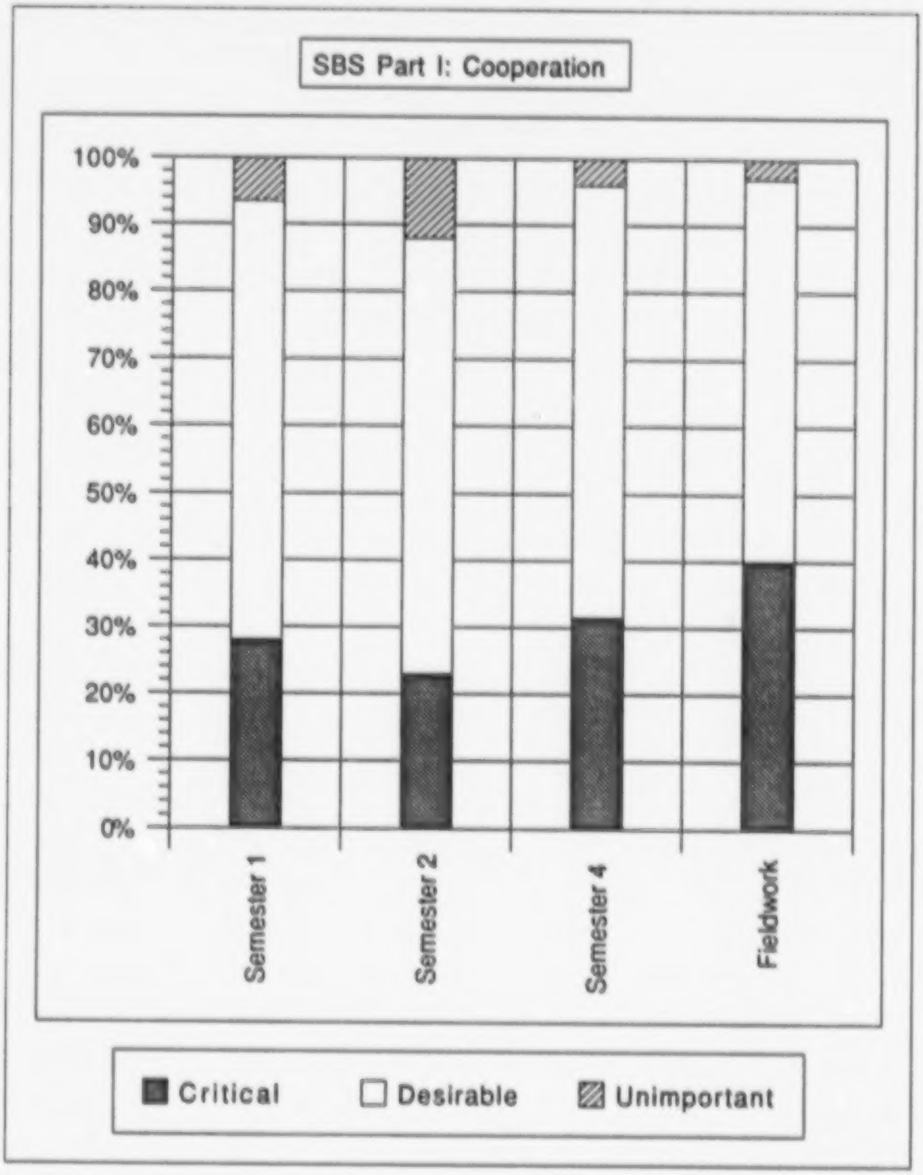

SBS Part I: Cooperation
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
Critical
Desirable
Unimportant

Figure 9b

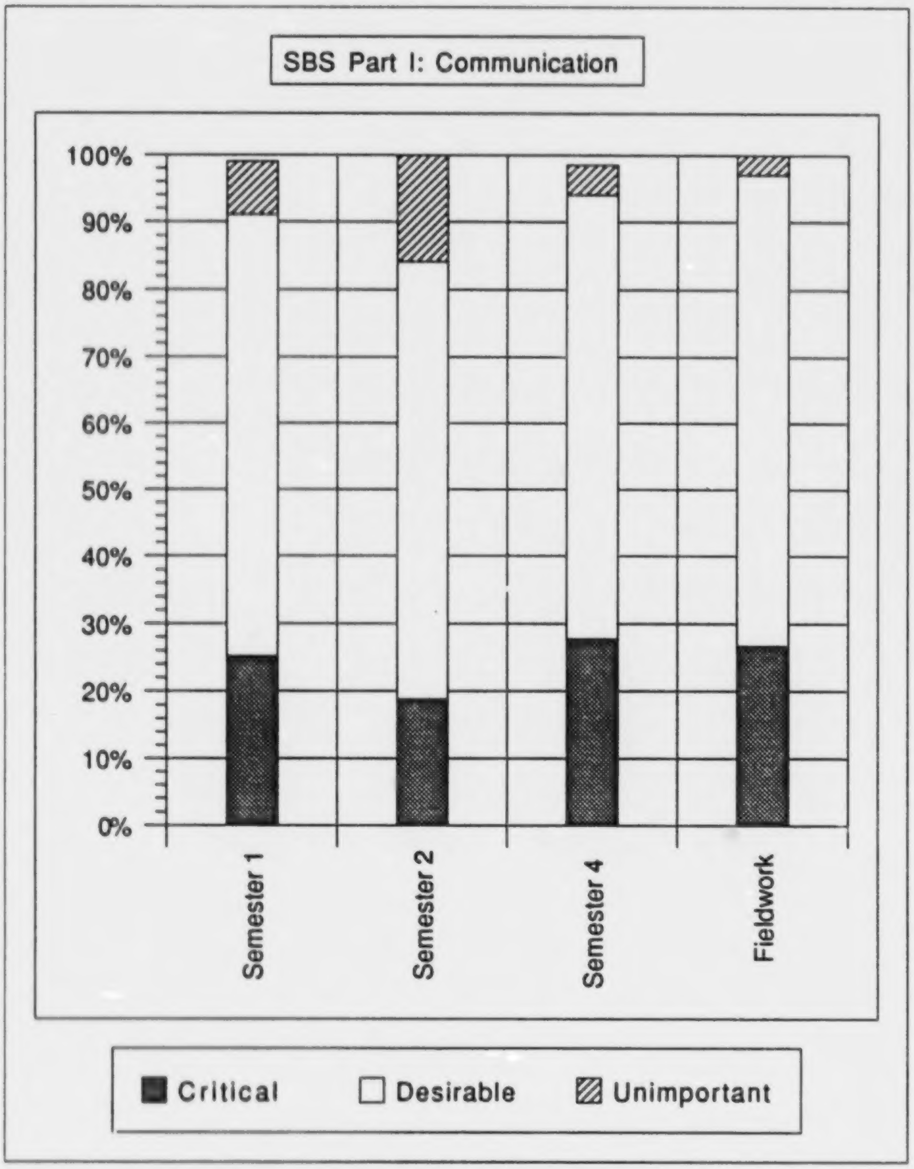

SBS Part I: Communication
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
Critical
Desirable
Unimportant

Figure 9c

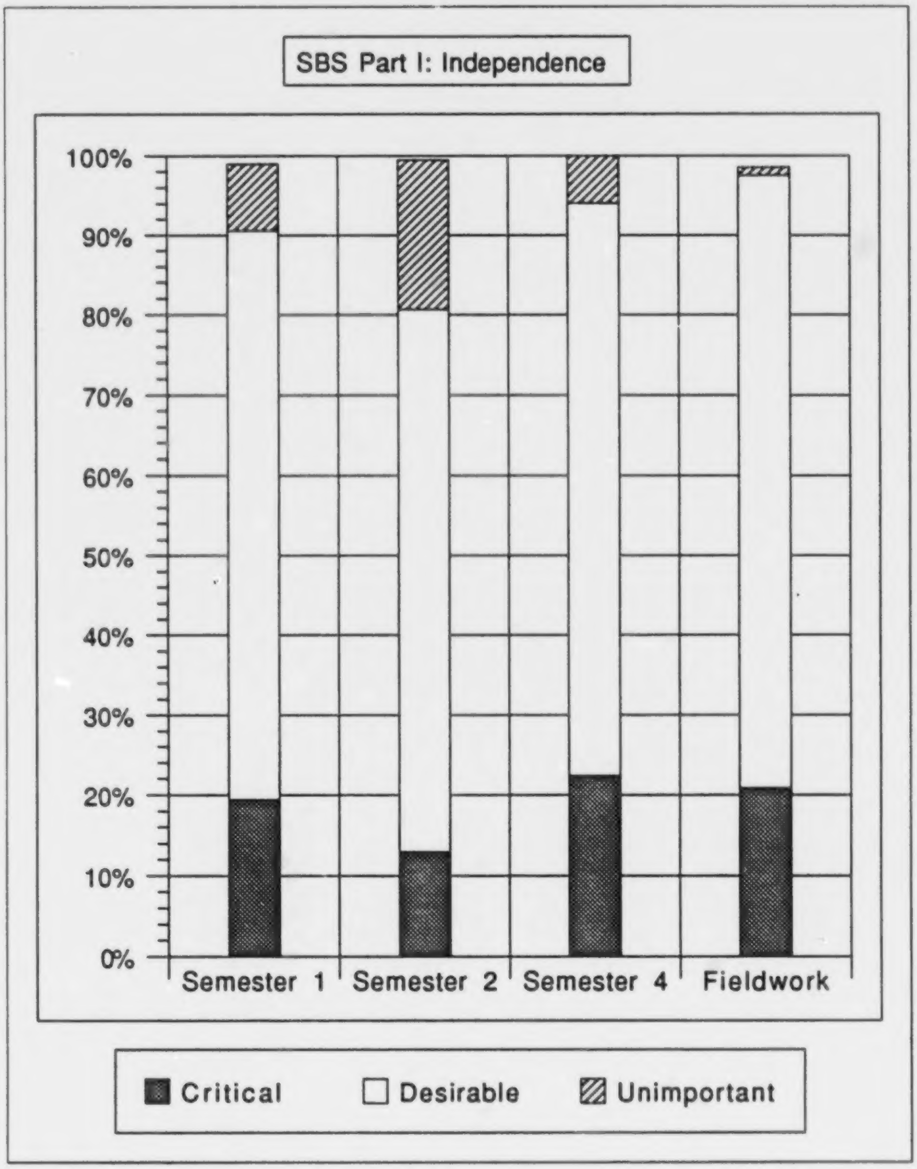
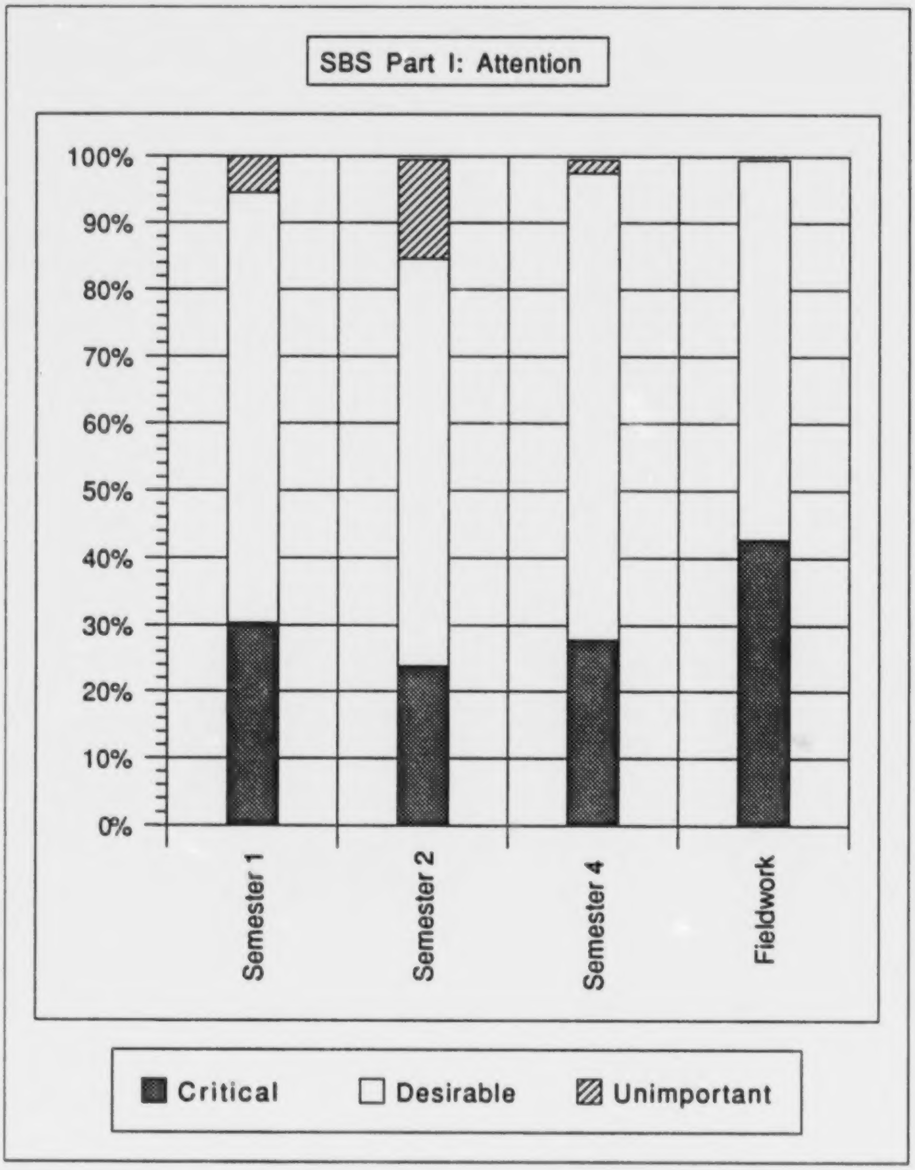

SBS Part I: Independence
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
Critical
Desirable
Unimportant

Figure 9d


SBS Part I: Attention
100%
90%
80%
70%
60%
50%
40%
30%
20%
10%
0%
Semester 1
Semester 2
Semester 4
Fieldwork
Critical
Desirable
Unimportant

Summaries from Site Personnel

Parents

Nineteen of thirty-one parent surveys were returned from the six fieldwork sites (61% return). Information gathered from the Family Questionnaire indicated that most of the respondents had 3 children, with 5 people living in the home, they had their own transportation, and all had telephones. All families responded that they kept books and magazines in the home. Parents frequently read to their children, or their children read independently. Family activities were commonly reported. Board games, family outings, t.v. viewing and household tasks were shared on a regular basis by all family members.

Communication was strongly reported between the parents and their children, in terms of the children's school work. All families reported that family members usually finished high school and that their children indicated a desire to go to college. 100% said their children enjoyed school.

All the fathers and 55% of the mothers in the sample indicated they were employed outside the home. Forty-five percent of the mothers were full-time homemakers. Ninety-nine % of the parents graduated from high-school; 61% of mothers, and 86% of fathers indicating pursuing formal education at some level past high school. Ninety percent of the families saw themselves as middle class, 5% as lower middle class, and 5% as upper middle class. All families who returned their packets were Caucasian and spoke English as the predominant language in their home.

The children in these families began receiving special services at age 6 or under. Parents reported an on-going involvement in their child's educational process. Most frequently cited were conferences with the teachers, related services personnel, written reports, and home programs. The children were most frequently reported as having motor deficiencies.

On the PEAQ (Appendix 11), parents indicated that they felt authority was important for a classroom teacher to have, but children should be able to point out if a teacher is wrong. Parents were evenly split on the topic of discipline (question #10). Parents reported that they were satisfied with their child's teacher and the cohesiveness of the school faculty.

On the CIQ (Appendix 2), the parents most frequently chose response B. "In regular classroom all day with supplemental materials and advice". When the questions were analyzed by categories, this group placed students described as physically handicapped into the response item A. "In regular classroom" with the highest frequency. The vignettes describing the Behavioral and Cognitive categories were most frequently rated as regular classroom with help. Two percent said students with physical handicaps were not for public education, and 1% made the same choice in the Cognitive category.

Administrators

Surveys were returned by six of nineteen persons serving in administrative positions (32% return). The responses to the Rural Needs Educational Survey (Appendix 13) show administrators are most concerned with finances, securing staff, providing OT/PT, inadequate facilities, long distances, and the small special education populations in these schools.

Special education professionals are usually recruited from universities. Most related services personnel are on staff, or contracted through a hospital. Other ways of obtaining personnel included contracting with an agency or private practioner. Thirty-three percent of the administrators indicated that 5-10 students in their educational area received occupational therapy services, 6%, 25-30 students and 33%, 35 or more students. Most of the respondents indicated only 0-5 students were being unserved in their area, one respondent indicated 25-30 students were unserved due to lack of therapy personnel. Table J lists what the administrators described as occupational therapy roles, Table K, pros and cons of hiring vs. contracting therapy students and Table L, inservice topics.

Table J
Administrative Views on Occupational Therapy Roles

Fine motor skill development	66%
Provide support for child's educational program (self help, perception, development)	33%
Evaluation team member	16%
Resource for staff	16%
Home program consultant	16%

All administrators indicated that they would consider hiring a paraprofessional to work with their occupational therapist on a limited basis.

Table K
Administrator Views on the Advantages and Disadvantages of Contractual and On-Staff Services

Contract	Hire
Pros	Pros
33% No supervision required	100% Integration of services, availability, and part of faculty
16% Time flexible	33% Provide in-service
16% Less expensive	16% High levelof service
16% Quality services	16% More control of staff/budget
16% Do not need to purchase equipment	
16% Can contract with agency	
Cons	Cons
66% Lack of control	33% Expensive
50% More expensive	33% Personnel issues
33% Unavailable for staff meetings	16% Can't always fill position
16% May not be able to increase time	16% Cost of equipment
16% Little flexibility	16% Bound by contract

Table L
Inservice Topics Ranked by Administrators

Incorporation of therapeutic techniques in classroom	83%
Adaptation of classroom activities	66%
Handwriting remediation	66%
Classroom organizational skills for students	50%
Perceptual-motor skills	33%
Visual-perceptual skills	33%
Sensory integration	33%
Positioning	33%
Evaluation tools	16%

Three of six, or 50% of the administrators surveyed completed the TEAQ (Appendix 11). The ones who chose not to complete it, indicated they felt it was intended for teachers, not administrative staff. All agreed with the need for education to be innovative, that progressiveness was worth the expense, and that basic academics continued to be emphasized in their curriculums. There was agreement that teachers should be respected, and a split on whether a student should inform a teacher of being wrong. Overall administrators indicated that they were satisfied with their jobs, but were split on issues of staff support and cohesiveness.

Teachers

Twenty-one of forty teachers (51%) returned the survey packets that were distributed. This population reported they were most frequently hired directly through the special services department, and recruited through advertising, and college placement services. These educators estimated that 0-15 students in their area were served by an occupational therapist. A few indicated 35 or more students received therapy services and one person said 25 or more students were in need of services, but not receiving them.

Educators stated that the role of the occupational therapist was to assist the classroom teacher with remediation of classroom fine and gross motor with the highest frequency. Following closely were the other role descriptions of: help students function independently, provide support to parents and faculty, therapy, evaluation, and to act as a resource person.

The top five concerns of rural special education is depicted in Table M. These concerns corresponded strongly with the areas seen as unique to the rural school system. Issues related to distance barriers and small class populations are repeated in this section.

Table M
Teachers' Concerns in Rural Special Education

Personnel resources to meet needs	38%
Providing amount of services needed by students	28%
Funding	23%
Transportation	19%
Teachers responsible for too many areas	14%

Teachers were also asked to rate inservice topics they would like provided by an occupational therapist. These are listed in Table N.

Table N
Inservice Topics Ranked by Teachers

Classroom adaptations	61%
Classroom incorporation of therapeutic techniques	61%
Perceptual-motor skills	57%
Visual-perceptual skills	48%
Student organizational skills	38%
Handwriting remediation	33%
Handling	28%
Sensory integration	23%
Feeding	23%
Positioning	23%

In responding to the TEAQ (Appendix 11), overall the educators indicated that they were flexible, supported innovation in the classroom, and felt it was affective to discuss students' performance with parents. The teachers felt students had a right to inform a teacher of being incorrect. Responses were dispersed across categories on the issues of need for teacher authority, and respect. Teachers also indicated mixed responses on the effects of parents visiting the classroom during the school day. Most indicated that they experienced job satisfaction and faculty support.

IMPACT OF PROJECT FINDINGS

Occupational Therapy Students

Overall the occupational therapy students who participated in the longitudinal data comparisons demonstrated an increase of knowledge skills and positive attitudes as their professional studies progressed. This finding is in accordance with the expectation of the preservice curriculum and the MORE project.

The Competency Exams results reflected changes in accordance with curricular experiences. Students gained immediate knowledge in those areas that were specific to a particular semester's coursework, but only retained the information if it was used in the next set of experiences. For example, the developmental theorists were mastered at the end of semester 1, but was not reinforced until fieldwork; therefore, scores went down during semester 4 and then raised after fieldwork. Students increased knowledge and maintained it in areas that were used repeatedly (e.g., Diagnosis, Service Provision, Reflexes).

Specially designed teaching activities produced some successful outcomes, as measured by the SBS part I. Students decreased their selection of "unimportant" ratings for the adaptive behaviors included on this test., as these behaviors are desirable for regular classroom instruction. This is important for occupational therapy students to realize before accepting a position as a rural-based school therapist because many children with disabilities will be integrated into regular classrooms. Understanding which behaviors are expected in the classroom increases the therapist's ability to collaborate on common goals with educational team members. For example, a child who has difficulty organizing their worksheets and school materials, may benefit from an occupational therapy consultation. The teacher and therapist can implement strategies to help this child, such as making a "map" of where materials are placed on their desk, placing a basket in the classroom for papers to be completed, and one for already completed papers. It is imperative that the occupational therapy students begin to think in terms of the educational model to work effectively in the rural school systems.

There was also an increase in some "critical" ratings may reflect the students' responses to their newly acquired knowledge about children and classrooms, perhaps causing them to overrate certain behaviors as "critical". Students may now be rating a child's ability to sit up straight in his seat as "critical" because of the training emphasis placed on proper positioning to enhance movement in a student with physical impairments. The more pronounced increase in the category by fieldwork students may be related to their own desire for children to behave properly and follow directions, as a result of their first-hand experience in working with children at their fieldwork site. Attempting to provide intervention to an uncooperative child could cause feelings of frustration and inadequacy in the fieldwork student. This in turn could result in the student overrating these behaviors. The students, recognizing the importance of cooperation and communication skills in their own personal development, maybe generalizing that these skills are "critical" for all persons in the role of student, including children in public schools.

On the CIQ, the students most frequently selected the least restrictive environment placements. It appears that curricular emphasis on integrated programming within children's natural environments has had an impact on student responses on the CIQ.

When looking at Attitudes Toward School-Based Services (ATSBS), the students chose the neutral response most frequently in all categories. The tendency of the students to choose the neutral column could be reflect lack of practical experience in the educational setting, which allows the practicing therapist to form clear opinions. Overall, students expressed optimistic attitudes about school based services.

These findings point out several implications for student training. First, knowledge attained in coursework appears to be useful for fieldwork experiences. Secondly, students need to be made aware that "ideal" classroom behaviors are not always critical and children can still be taught without a perfect set of behaviors. Furthermore, they have to become aware that educational personnel have the responsibility to teach these children. Occupational therapy students need to recognize that the occupational therapist plays a key role in collaborating with classroom teachers to design strategies to accommodate maladaptive behaviors. third, curricular attention to best approaches and attitudes seems to have an impact on student reports and performance. It remains to be seen whether these changes alter their practice activities.

All occupational therapy students who completed MORE fieldworks reported positive experiences. The Student Fieldwork Evaluation (SFE) (Appendix 8) allows students an opportunity to provide the fieldwork sites and the Occupational Therapy Education Department with information about the fieldwork experience.

The fieldwork students reported that the pediatric coursework provided information that was appropriate for the fieldwork experience. The students indicated that they were well prepared for their experiences related to growth and development as well as developmental disabilities. Several indicated that additional training in behavior management would be useful.

The fieldwork supervisors completed the Fieldwork Performance Report (FWPR) (Appendix 9). The FWPR allows the site supervisor an opportunity to rank the students on a scale of 1 (poor) to 5 (excellent) in the areas of performance, judgment, and attitude on 51 items. These questions address issues such as assessment, treatment, and professionalism. The supervisors consistently ranked the MORE fieldwork students high in the assessment, planning, and treatment areas. The supervisors also indicated that the students were academically well-prepared for the pediatric fieldwork experience.

Six students participated in research projects as part of the MORE project. The course, "Problem Evaluation in Occupational Therapy" promotes undergraduate research experience. It is intended for the students to develop a working knowledge of occupational therapy research concepts and methods to successfully 1) critically read and abstract professional research literature and 2) produce a research proposal.

Students propose their research projects in the third semester of study and then complete the project in the fourth semester. Students are assigned to a faculty mentor and presentations to the occupational therapy education department are made at the end of the fourth semester.

The following student research projects were completed as part of the MORE grant. Information from these projects is available upon request.

Becky Baldwin	*Comparison of occupational therapists and elementary education teacher's attitudes about where special children should be placed with the school system.*
Sandra (Strawn) Neider	*A comparison of the attitudes of occupational therapy students in different levels of education toward service delivery in rural schools.*
Karen Mycanka	*A comparison of occupational therapy students' knowledge of pediatric issues.*
Connie (Christian) Keeney	*Comparison of early attitudes of occupational and physical therapy students toward placement of special children in educational settings.*
Dawn Jackson	*Comparison of attitudes of rural personnel and education students.*
Marlene Jimenez	*Comparison of occupational and speech therapy students toward placement of special children in educational settings.*

Project Sites

In review of the CIQ results, and in comparing parents, educators, and registered occupational therapists, the pattern of responses are similar in all categories. Parents and educators place children with physical impairments in the regular classroom more frequently than did the occupational therapists. Occupational therapists placed these children in a regular classroom with intervention more frequently. A few parents and educators indicated "not for public education" as a choice, while none of the occupational therapists chose this option.

The disparity between the parents/educators responses and the occupational therapist's responses, could be indicative of the occupational therapists' experience with people with physical disabilities who frequently receive on-going intervention. It is also possible that parents and educators may not fully understand occupational therapy's role in the school environment and recognize the types of support that can be provided for students to maintain their least restrictive placements in regular education.

On the TEAQ, the parents, teachers, and administrators indicated an overall support of each other, and an on-going need for innovations in education.

Administrators and educators also had similar response patterns on the Rural Needs Survey. Distance, low incidence, and difficulty securing/retaining staff were common themes. Both groups indicated a desire to receive inservice from occupational therapists, particularly in the area of techniques for classroom adaptation. Administrators must inform occupational therapists of their desire for this service, and then provide the support which allows the occupational therapist to accomplish these tasks. Educators can also communicate their needs in this area and indicate specific topic areas they would like to their occupational therapist to address. The entire staff must then make a commitment to follow through with appropriate techniques within the classroom, with follow-up appointments provided by the therapist to discuss specific techniques and their outcomes. Occupational therapists must provide inservices with administrators and educators on specific areas of interest and devise follow-up plans as appropriate.

Other Educational Programs in Occupational Therapy

A study by the American Occupational Therapy Association reports that 18% of new graduates will accept positions as school-based therapists. (Silvergleit, 1990). This finding reinforces the need for pre-service training curriculums to emphasize the skills needed to work in school systems. Therapists need an understanding of educational philosophies and how to support students in their educational system. This includes issues of service provision, working knowledge of PL 94-142, and PL 99-457, as well as state educational plans, and occupational therapy best practice guidelines (provided by AOTA and the State Educational Agencies). There are three primary categories of content that must include: an expansive view of the service provision process in educational settings, unique requirements and needs of rural environments. and methods for implementing an integrated approach within schools.

The service provision process is complex and encompasses issues such as who to see, when to see them, how frequently services are provided, what type of intervention meets demonstrated needs, and when to discontinue the services (Dunn & Campbell, 1990). The therapist and educational team collaborate to decide the best possible individualized plan for the student. Thorough discussion of service provision issues are essential in the pre-service curriculum to prepare students for the school setting. Knowledge of the public law is needed to make service provision decisions as a team member, and to document activities within the parameters of the law.

Monitoring and consultation as viable service provision options for school-based services need to be stressed (see AOTA, 1989 and Dunn & Campbell, 1990). Sometimes OT students are taught what these service provision options are, but do not know how to employ them with facility resources and other team members.

Students also need to be prepared for the unique circumstances of rural settings, such as long distances to travel and isolation from other professionals. If students were prepared to meet these challenges, and had plans established to deal with these situations, perhaps there would be less attrition in the rural settings. Pre-service training could address prioritizing equipment needs, for administrators, modifying intervention plans to better match space and time parameters, devising plans within a team structure and establishing a communication network with other therapists, (i.e. join state/national associations, join study group, develop list of contact people). New graduates can also be encouraged to negotiate with administrators to provide supervision, consultation or mentoring from a more experienced therapist during the first year.

Changes in pre-service curriculums are needed if occupational therapists are to survive in rural school systems, and provide quality services.

Occupational Therapists in Rural Educational Settings

Occupational therapy services are provided in the school system because of the provisions in PL - 94.142, which was passed in 1975. The authors of this bill were of the belief that all children were entitled to a "free and appropriate education, which includes special education and related services to meet their unique needs". Therefore they were also aware that some children experienced disabilities which would prevent them from benefitting from the traditional educational system. These children may require support systems to function within their educational environment. Therefore, occupational therapy was included as a related service option for school children.

Service provision models for occupational therapists have been outlined by AOTA. Direct therapy is provided to an individual or small group, with intervention occuring at least once a week. Monitoring is the direct teaching supervision of others who are implementing the therapeutic procedures. Consultation occurs when occupational therapists offer their unique expertise to help others in the education system acheive their goals. There are three types of consultation: case (focuses on individual student needs), colleague (focuses on needs of other professionals in the educational environment), and system (focuses on needs of generic groups within the system, such as parents of preschoolers).

Within these service provision models, therapists have the capacity to teach students specific skills, work with others to facilitate generalization, and carry over reinforcment of skills, and impact the system to make it more responsive to children with special needs (Dunn & Campbell, 1990). These models may be used sequentially or simultaneously. A therapist may have different service provision roles as a child's needs change throughout their years in the educational system.

The occupational therapist also has an opportunity to impact the system at the pre-assessment level (the period of time after the teacher notices a problem and is trying to adapt learning strategies and before referral for comprehensive assessment). Even if the occupational therapist is not on the pre-assessment team, the therapist can offer the team intervention strategies (see Section II: Preassessment Materials), for specified problems that can be served by occupational therapy expertise. Input at this level may decrease need for evaluation and educates other team members about the role and unique skills of the occupational therapist.

Occupational therapists and other team members are also expressing a need to establish decision-making criteria for eligibility and intervention planning for occupational therapy services. The AOTA (1989) and Dunn & Campbell (1990) provide methods for making consistent decisions in educational settings. Representative materials are provided in Section II of this manual.

DISSEMINATION ACTIVITIES OF THE MORE PROJECT

Workshops and Conferences

1. Kansas Federation for Exceptional Children
   Overland Park, Kansas, November, 1987.
   "Occupational Therapy Responds to Changing Needs: Programs for Young Children."
2. American Council on Rural Special Education (ACRES)
   Monterey, California, February, 1988
   "M.O.R.E. Initial Findings."
3. American Occupational Therapy Association (AOTA) Annual Conference
   Phoenix, Arizona, April, 1988.
   "Managing Occupational Therapy in Rural Education."
4. American Council on Rural Special Education (ACRES)
   Ft. Lauderdale, Florida, March, 1989
   "Student Perceptions of Adaptive Classroom Behaviors"
5. American Occupational Therapy Association (AOTA) Annual Conference
   Baltimore, Maryland, April, 1989
   "Managing Occupational Therapy in Rural Education"
6. Kansas Occupational Therapy Association Conference
   Olathe, Kansas, April, 1989
   "Managing Occupational Therapy in Rural Education"
7. International Conference in Special Education
   Vancouver, British Columbia, Canada, May, 1989
   "Managing Occupational Therapy in Rural Education"

Newsletters

Project updates were periodically sent out over the Special Net Bulletin Board, (a computer-based information center which sends messages to contracting school system agencies), through state and national occupational therapy newsletters and a article printed in the Developmental Disabilities Special Interest Section Newsletter, distributed by AOTA. Inquiries from persons interested in the project were generated through these channels.

Meetings with Colleagues

Meetings were held with a group of grant consultants each June. This meeting was used to update the consultants and exchange ideas for the direction the grant should take in the coming year.

A representative from the Therapy In Educational Settings (Project Ties), Sandy Hall, visited in the Fall of 1989. She made a site visit of a rural fieldwork setting and met with area occupational therapists and educators to learn about Kansas programs. Project Ties is associated with the Crippled Children's Division - University Afflicted Program, the Oregon Health Sciences University and the Oregon Department of Educational Regional Services for Students with Orthopedic Impairment.

Manuals

The MORE manuals were developed to provide a concise report of the grant's activities, provide an outline for other universities, and to provide current information to rural pediatric therapists.

Journal Articles

Articles which were published as a result of grant activities included:

Dunn, W. (1989). Integrated related services for preschoolers with neurological impairments: Issues and strategies. Remedial and Special Education, 10(3), 31-39.

Dunn, W. & Gray, B. (1988). Managing occupational therapy in rural education (MORE): Initial findings. (OSERS Grant No. G008730057). American Council on Rural Special Education (ACRES) Conference Proceedings.

Dunn, W. & Hughes, P. (1989). Managing occupational therapy in rural education (MORE): Occupational therapy student perceptions of adaptive classroom behaviors. American Council on Rural Special Education (ACRES) Conference Proceedings.

Hughes, P. & Dunn, W. (1989). Preassessment: An effective tool for the rural therapist. Developmental Disabilities Special Interest Section Newsletter, 12(4), 3-5.

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Dunn, W. (1990). Pediatric occupational therapy: Facilitating effective service provision. Thorofare, NJ: SLACK.

Dunn, W. (1990). Integrated related services. In L. Meyer, C. A. Peck, & L. Brown (Eds.), Critical issues in the lives of people with severe disabilities. Baltimore, MD: Paul H. Brookes Publishers.

Dunn, W. & Campbell, P. (1990). Components of the service provision process. In W. Dunn (Ed.), Pediatric occupational therapy: Facilitating effective service provision. Thorofare, NJ: SLACK.

York, J., Rainforth, B., & Dunn, W. (In press). Training needs of physical and occupational therapists serving school aged learners with severe disabilities. In A. Kaiser, & C. McWhorter (Eds.), Critical issues in preparing personnel to work with persons who are severely handicapped. Baltimore, MD: Paul H. Brookes.

Professional Papers Presented

Decision Making Paradigms in Occupational Therapy
Faculty Lectureship- University of Wisconsin
Madison, WI April, 1989

Consultation as a Therapeutic Strategy
The Association for Persons with Severe Handicaps (TASH)
San Francisco, CA December, 1989

Creating, Designing, and Implementing Effective Interventions in School Settings
Keynote Speaker for TIES (Therapy in Educational Settings)
Eugene, OR February, 1990

Current Issues in Providing Related Services in the Schools
Critical Issues for OTs in the School System Workshop
Phoenix, AZ February, 1990

Current Issues in Providing Related Services in the Schools
East Metro Special Education Coalition
St. Paul, MN February, 1990

Therapy Services in Early Childhood Programs: Making
Effective Service Provision Decisions
In Celebration of Diversity: 1990 Early Childhood Intervention in Kansas Conference
Wichita, KS March, 1990

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SECTION 2

RESOURCES FOR RURAL SCHOOL OCCUPATIONAL THERAPISTS

Overview

Occupational therapists can provide many unique services within school systems, and bring an important perspective to the concepts mandated by Public Law 94-142, and more recently, Public Law 99-457. In order for occupational therapists to be successful within these environments, they must: a. understand the priorities and demands of these systems, and b.have the ability to apply their unique knowledge and skills to issues that arise within schools. Many occupational therapists who are presently working in the schools, did not have the advantage of learning about the educational system prior to entering their professional careers.

When occupational therapists work in rural public schools, they face additional challenges. The schools are more spread out, and and the students are fewer in number; therefore the therapist is responsible for a wide geographical area, and frequently must work alone. Therapists in these situations may feel that they do not have adequate access to current information which would enhance their ability to provide effective services.

The Occupational Therapy Curriculum at the University of Kansas recognized that these issues were pertinent to many midwest public school programs. They obtained funding from the Office of Special Education and Rehabilitation Services (OSERS) to investigate these issues and create learning opportunities so that future occupational therapists will leave their academic preparation more prepared to address these challenges successfully (project entitled: Managing Occupational therapy in Rural Education-MORE). During this process they also obtained information from midwest occupational therapists, administrators, teachers and parents, which was used to determine critical content for the learning experiences.

These resource materials were formulated during the MORE Project to address the topics/issues the professionals identified as important. Occupational therapists who work in the public schools, and especially those who serve rural locations will find the materials very useful.

Preassessment Materials

A critical issue for the rural school-based occupational therapist is the ability to obtain appropriate referrals. Many times the other professionals in the school do not understand what the occupational therapist has to offer to the problem solving process. Referrals in these situations tend to be more general, and frequently are in more abundance than they need to be. The occupational therapist then faces the dilemma of how to address all the assessments and still continue to provide intervention for those students who have already been identified. It is a poor use of resources to have professionals conducting assessments on many students who ultimately do not have problems which interfere with their education.

Many school districts have created a mechanism to address this problem. The mechanism is useful (in Kansas it is called the Preassessment process) because it addresses not only the inappropriate referral problem, but it also acknowledges a core principle of PL94-142--that of Least Restrictive Environment. When a teacher has a concern about a student's learning strategies, the teacher can bring these concerns to a team of colleagues for assistance (the teams are usually made up of other classroom teachers, and one or two others such as a special education teacher, the principal). This team collaborates with the teacher to identify alternate strategies which can be implemented within the classroom to address the problem. They also provide support as necessary to insure that the teacher can carry out the alternate strategies successfully. If the problem is resolved, the student stays within the regular classroom, and there is no need to pursue a comprehensive assessment. The advantages are that teachers learn many new ways to manage classroom problems, and students receive support to remain within the least restrictive environment. The Kansas State Plan for Special Education (KSDE, 1987) defines this process:

> Preassessment is the first phase in determining whether the educational needs of a student can be met within the regular classroom... (it) provides supports and assistance to regular classroom teachers so that they may deal effectively with students who exhibit learning and/or behavior differences... no child can be labeled as exceptional until the multidisciplinary team has documented that the child had an opportunity to have learning experiences appropriate to his/her age and abilities, and that the child's learning potential has not been achieved in the regular classroom environment. (p. 10)

Occupational therapists have a lot of unique knowledge to contribute to the Preassessment process, especially in regard to task and environmental adaptation. By providing this input, students can be supported within their classrooms, other colleagues learn about occupational therapy knowledge, and referrals can become more focused on students with more significant difficulties. The following article provides information about preassessment strategies for children with neurological impairments; common referral complaints and alternate strategies are offered. It can provide a useful first step in developing an active preassessment process.

Integrated related services for preschoolers with neurological impairments: Issues and strategies, Winnie Dunn. RASE, v. 10(3), pp. 31-39. This article is reprinted with permission.

RASE **Feature Article**

Integrated Related Services for Preschoolers with Neurological Impairments: Issues and Strategies

Winnie Dunn

Occupational and physical therapy are considered related services for school-age children under the provisions of P.L. 94–142, and this provision has recently been extended to preschoolers under Part B of P.L. 99–457. This means that therapists are part of the educational team for all children who require this expertise to profit from educational experiences. Clarifying the therapist's role and how to implement it have been difficult processes for a number of reasons, including lack of knowledge about what therapists might be able to contribute to educational experiences and how to incorporate their expertise into the learning process. This article presents an introduction to the contribution that related service professionals can make to the learning of children with neurological impairments and reviews research showing the positive effects of a number of therapeutic strategies that have been reported in the literature. Methods for integrating therapeutic strategies into learning experiences and issues for future consideration also are presented.

THE ORIGINAL PROVISIONS of P.L. 94–142 designate occupational and physical therapy as related services to programs for school-age children. With the recent extension of P.L. 94–142 provisions to 3- to 5-year-olds, occupational and physical therapy are now also considered related services to educational programs for preschoolers. This means that therapists are part of the team for all students who need these services to profit from their educational experiences. It also means that only those problems that affect learning may be addressed as part of the educational program. Those needs that are therapeutic but that do not affect learning are to be addressed in other settings (e.g., hospitals). When designing individualized programs for preschoolers with neurological impairments, team members must consider those student needs that might effectively be addressed with occupational and physical therapy input. It is especially critical for team members to recognize opportunities to utilize this expertise within the established preschool curriculum.

However, related services are frequently underutilized in preschool programs; utilization has been difficult for several reasons. First, related service professionals frequently are not adequately prepared to provide services within a natural environment such as a preschool classroom. Historically, it has been more common for therapists to apply a medical model approach and focus on individual needs in an isolated setting. When the environment and its specific demands are unfamiliar, it becomes difficult to plan effective strategies for that environment. Second, educators are frequently not aware of appropriate referral criteria for related services, and therefore this potential resource goes untapped. Educators would profit from additional information regarding the knowledge and skills of therapists as a means of establishing more effective partnerships. Third, many preschool programs for children with handicaps continue to be segregated from programs for typical children, despite the growing body of evidence documenting the efficacy of integrated preschool programs (Campbell, in press) (see Note 1). Program segregation both alters the type of opportunities available to preschoolers with handicaps and perpetuates an environment that supports isolated service provision models. Finally, many are unable to find therapists to serve their programs. Service needs are expanding without commensurate growth in the number of available therapists. The purposes of this paper are to review recent literature regarding effective therapeutic interventions for children with neurological impairments, to introduce several successful methods for combining related service and education models, and to suggest directions for future practice, research, and policy development.

Models of Integrated Related Services

A number of authors have proposed models for service provision in schools (e.g., American Occupational Therapy Association, 1987; Sternat, Messina, Nietupski, Lyon, & Brown, 1977). Sternat et al. (1977) described a dichotomous model with isolated therapy occurring when therapists pull students out of classrooms for intervention, and integrated therapy occurring within the classroom in collaboration with teachers. The American Occupational Therapy Association (1987) describes a continuum of services that includes direct treatment, monitoring, and consultation. Direct treatment is utilized when the therapeutic techniques needed to address problems can safely be carried out only by the therapist. Monitoring is used when the therapist supervises specifically designed intervention as it is carried out by others (e.g., teachers or aides). Through regular contact, the therapist ensures that techniques are carried out properly within the context of other learning activities. Consultation involves therapists using their expertise to collaborate with other team members to design learning experiences that incorporate important philosophical considerations and that also meet the goals of the consultee. The therapist does not supervise activities designed during consultation, but rather collaborates to plan a manageable strategy for which the consultee holds responsibility. Monitoring and consultation in this model correspond to integrated therapy as described in Sternat et al.'s (1977) model. However, direct treatment does not have to be provided in an isolated manner; the therapist can provide these services within learning activities and environments whenever possible (Campbell & Dunn, 1989). The continuum model enables the team to design a more closely fitting intervention program to meet children's needs.

Integrating related service expertise into learning activities embraces the concepts of providing intrinsic motivation and purpose for tasks (Clark, 1979; Fidler & Fidler, 1978; West, 1984). Occupational and physical therapists work toward increased independence within their program planning, but frequently have fallen short of integrating those plans into educational needs and strategies. In an attempt to investigate the effectiveness of models, Giangreco (1986) contrasted isolated and integrated therapy models in a study in which he observed the ability of a student with multiple handicaps to activate a microswitch. During the isolated condition, the therapist spent 30 minutes working on joint range of motion, reduction of tone, and facilitation of movement; immediately after this session, the teacher worked on activation of an adapted microswitch. During the integrated therapy condition, the teacher and therapist collaborated to design a method for incorporating facilitation and tone reduction techniques into the microswitch activation activity. The student performed significantly better during the integrated therapy condition, suggesting that this strategy may be the best use of professional and student time. The value of the collaborative process must not be underrated; educators and therapists alone tend to rely on their own areas of expertise to solve a problem (Giangreco, 1986), when, in fact, the best solution may require a combined strategy or may evolve from the act of sharing expertise (Campbell, 1987a).

In order for team members to collaborate on integrated programming, a change in the professional's approach to the team process must occur. Since the student is the focus of attention, goals must not reflect a single discipline expertise, but rather must address performance of that student within the appropriate learning context (Campbell, 1987a; Dunn, 1987; Rainforth & York, 1987). Several authors also suggest that behaviors, responses, and movements must be functional to warrant programming (e.g., Campbell, 1987a; Dunn, Campbell, Oetter, Hall, & Berger, 1989; Rainforth & York, 1987). Behaviors are functional if they facilitate useful interactions within the environment or approximate greater independence in appropriate life tasks (see Note 2). The planning and implementation process is directed at creating strategies that successfully combine discipline expertise into functional skill development in natural environments. Professionals identify appropriate levels of training and supervision for the program plan to be safely implemented. Rainforth and York (1987) suggest several guidelines for integrating related services. They recommend that, in addition to traditional assessment procedures, a designated team member conduct an inventory of the environment and observe the student carrying out functional tasks within that environment. Planning occurs through collaborative discussion, and intervention is carried out by the team member who is most frequently present in the specified environment (e.g., the teacher). Campbell and Wetherbee (1988) and Hunt, Goetz, and Anderson (1986) found that Individualized Education Programs (IEPs) in settings that utilized an Integrated Programming Team model were more functional in nature. Hunt et al. (1986) used a predesigned format to compare the IEP goals of 18 students in segregated schools with the IEP goals of 18 students in general public schools. The parameters used were age-appropriate materials and tasks, use of basic, critical, and interactive activities, use of multiple natural settings. Overall IEP quality was significantly better for the integrated group on these parameters. Campbell and Wetherbee (1988) used the same judgment parameters in their study but compared IEPs before and after an Integrated Programming Team experience. They found significant increases in functionally oriented objectives and some increases in the age appropriateness of objectives. Teams still needed to improve use of critical, interactional, and generalizable activities. More study is needed to identify successful team characteristics and strategies.

The use of integrated strategies appears to hold promise for positive functional outcomes for children. In order for integrated strategies to be the intervention of choice, professionals must be more aware of what contributions can be made by related service personnel and how this collaboration can be put into practice.

Establishing Successful Integrated Related Service Strategies

Therapists have in-depth knowledge of the neurobiological system, which enables them to recognize the impact of specific impairments on movement and stability. This knowledge can be used in a variety of ways to support developmental and learning tasks. For example, therapists might use this knowledge to design effective positioning and handling strategies that minimize the effects of abnormal tone and enable the child to experience the environment in a more productive way (Harris & Tada, 1983).

For children who have neurological impairments, related service expertise is most commonly associated with sensorimotor development, postural control, activities of daily living, and environmental adaptations. deQuiros and Schrager (1978) and Ayres (1980) hypothesize that there are significant relationships among sensory processing, postural control, and children's abilities to interact effectively within their environments. A few studies have been conducted to investigate the usefulness of specific therapeutic strategies in facilitating development. Kuharski, Rues, Cook, and Guess (1985) and Ottenbacher, Short, and Watson (1981) demonstrated that controlled vestibular input improved motor performance in children with multiple handicaps; Campbell, McInerney, and Cooper (1984), Barnes (1986), and Campbell and Stewart (1986) used specific neuromotor procedures to increase functional movement patterns; Campbell (1987b) presented a number of integrated service strategies for children with multiple handicaps; and Anderson, Hinojosa, and Strauch (1987) discussed the combined use of play and neuromotor procedures to facilitate developmental skills. These findings provide insight regarding which strategies successfully address specific problems and identify interventions that might successfully be applied to classroom situations in future practice and research efforts.

Sensory Techniques. A therapeutic technique therapists frequently choose involves activation of sensory mechanisms. Proper processing of sensory input underlies the development of accurate maps of self and environment (Ayres, 1980). These maps, in turn, enable the individual to organize, plan, and carry out effective movements of body parts in space. When sensory input is distorted or unreliable, it becomes more difficult to create efficient movement. Kuharski et al. (1985) conducted a single-subject multiple baseline study with three preschoolers who had severe handicaps to determine the effects of controlled vestibular stimulation (in this case, spinning a designated number of times, in a designated direction and speed while positioned upright and sidelying) on the children's ability to acquire and maintain a symmetrical and erect sitting posture. Their findings revealed that controlled vestibular input facilitated more overall erect sitting posture in the subjects but that inconsistencies in individual performances persisted. Ottenbacher et al. (1981) also studied the use of vestibular stimulation, but used a treatment and control group design with 38 children with severe handicaps. Services were provided for approximately 2 hours per week for 13 weeks, with the treatment group receiving both controlled vestibular input and sensorimotor activities, and the control group receiving only sensorimotor activities. The treatment group demonstrated significantly better performance on postural and reflex integration and on motor milestone acquisition as tested by the Peabody Developmental Motor Scales. These studies suggest that sensory stimulation techniques such as these may successfully be used as a preparatory activity to other classroom tasks. For example, with better erect sitting and postural control, a young child may be more able to engage in tabletop tasks or eating, which require these background skills for more independent task performance.

Posture and Movement. When a child is positioned properly, less effort is required to maintain the body against gravity, and so it becomes easier to attend to a toy, the teacher, or other students (deQuiros & Schrager, 1978). For example, a child who cannot extend the arms because so much effort is needed to hold up the head and trunk will be unable to play with a movable toy on the table or point to a picture on a communication board (Campbell, 1987b). Therapists also use their knowledge to facilitate adaptive movement patterns, allowing the child to interact more effectively in the environment. Creation of a strategy to allow the child to move about in the classroom or school widens the scope of environmental exploration; such a strategy can include crawling, use of a scooter board, walker, or wheelchair, as well as walking, and must match the specific abilities of each child within the learning environment.

Reaching is a functional pattern of movement needed for many school activities and is therefore frequently the focus of attention for both therapists and teachers in individualized programs of children with neurological impairments. Campbell et al. (1984) designed a specific neuromotor technique to support the acquisition of reaching in a preschooler with multiple handicaps, and trained all classroom personnel to use the technique and record data on successful reaching throughout the school day. They found that the child acquired the skill of reaching more quickly during some activities (e.g., circle time), and hypothesized that task motivation is a variable that is critical to the success of therapeutic intervention. Their hypothesis was supported in another case study in which an older student received various types of reinforcement for reaching to activate a microswitch. Rock music produced more reaching than vibration, activation of a fan, or other music (Campbell et al., 1984).

Barnes (1986) utilized upper extremity weight bearing as a therapeutic technique to improve functional reach-grasp-release motor movements. The investigator operationally defined eight subskills that constitute successful movement and recorded the presence of these components during activity. Upper extremity weight bearing was introduced as the intervention in the reversal design. The investigator documented that during the weight bearing condition, more components of the reach-grasp and release pattern were present. When an individual bears weight on a limb, specific joint receptors are stimulated to increase body awareness. Weight bearing can easily be incorporated into classroom routines to facilitate better interaction with the environment. Campbell and Stewart (1986) added a functional component to their study of reaching by allowing the toddler with hemiplegia to select from several activities that all required scooping. Researchers collected data on the components of movement that were necessary to reach and scoop. By reinforcing successive approximations of the desired movement pattern, the toddler's performance improved. Reaching is a desirable behavior for educational tasks; the combination of therapeutic techniques and classroom activities may enhance the performance outcomes.

Play experiences designed to increase spontaneous interactions with the environment and to practice movement skills are commonly a part of the therapist's intervention strategies (Florey, 1981) and are also an integral part of preschool programs. Anderson et al. (1987) propose an intermingling of neuromotor handling techniques and play, since play is an important part of young children's lives. Sparling, Walker, and Singdahlsen (1984) combined play, art, and drama activities for children with neurological impairments and reported improved developmental skill acquisition. However, lack of pretesting suggests that one must use caution in interpreting these results. Since play is used by both teachers and therapists, it may be an excellent focus of attention for collaborating on intervention strategies.

Activities of Daily Living. Therapist knowledge is also applied to daily life tasks, including eating, personal hygiene, and dressing, each of which requires a complex pattern of motor and cognitive skills for task completion. Oral-motor dysfunction, a frequent correlate of neurological impairment, interferes with the mastery of eating skills, and is commonly addressed by related service personnel. Eating requires reach and grasp to obtain food or use a utensil, and bringing the food to the mouth; it then requires a series of oral-motor movements to close the lips, move food in the mouth, and swallow. Muscle facilitation and control techniques are designed to enable a young child to participate in as many components as possible during mealtime. Over time, the goal would be to decrease support and increase independent or adapted task performance. Sobsey and Orelove (1984) addressed lip closure and chewing problems in children with severe handicaps by providing desensitization to the skin surfaces and facilitation of oral musculature. They found that daily use of these procedures (10 to 15 minutes prior to meal) resulted in better lip closure and less spilling from the mouth. Chewing results were equivocal, being dependent on food types presented to the child.

A similar neurophysiological procedure was used by Jones (1983), but was combined with behavioral contingencies (the experimenter ignored the children's avoidance behaviors toward food offers) to immediately introduce solid foods to children with mental retardation. The combined neurophysiological and behavioral program was successful in getting 8 of 10 children to accept solid foods after 15 meals. In a comparison group, Jones (1983) withdrew sensory and neuromotor procedures when avoidance was exhibited, while increasing food textures over the course of the study. Only 2 of 10 subjects accepted solid foods in this condition. This investigator confounded this study by combining a number of procedures in such a way that causality is difficult to determine.

Jaw control and neurophysiological facilitation also proved to be successful strategies to increase mouth closure and therefore decrease drooling after drinking in a child with a severe handicap (Ray, Bundy, & Nelson, 1983). These studies suggest that useful therapeutic techniques can be created by therapists to support and facilitate effective eating patterns. Correct application of these techniques to the daily meal or snack routine requires careful planning, but can lead to improved functional skill.

Environment. Consideration of environmental variables is also an important contribution of related service personnel. It is in the best interest of children when professionals identify a balance between interventions that increase functional skills and assistive and adaptive devices that make new learning opportunities possible (Campbell, in press). There are times when a change in the environment itself can provide better support for children's learning. For example, repositioning of furniture in a classroom would enable a child in a wheelchair or with a walker to move about the classroom without assistance. In other cases, adaptations of personal learning devices or body positioning equipment can be fabricated to support functional task performance. For example, a therapist might fabricate a hand splint to support wrist extension, which would allow finger movement for manipulation tasks, or may create an adaptation of a microswitch, which would encourage good movement patterns for activation of the toy, tape recorder, or computer. Some adaptations are simply carried out by classroom personnel while others require a collaborative effort. Examples of simple adaptations that can be made to try to accommodate for frequently observed problems in the classroom are shown in Figure 1. If adaptations such as these are unsuccessful, collaboration with a therapist may be necessary. More serious concerns warrant immediate therapist involvement.

Environmental adaptations may support a wider variety of life experiences and more independent interactions. Caregivers have reported that after individually designed adaptive equipment was introduced, children demonstrated improved motor, self-care, and social skills (Hulme, Gallacher, Walsh, Niesen, & Waldron, 1987; Hulme, Schulein, Hulme, Poor, & Pezzino, 1983). Other studies employed direct behavioral observation to determine effectiveness of adaptive devices for supporting improved functional life tasks (Hulme et al., 1987; Trefler, Nickey, & Hobson, 1983). Hulme et al. (1987) report improved posture, head control, and grasp with the introduction of an adapted seat. Trefler et al. (1983) found better head and trunk control, purposeful gross motor movements, and eating after individualized adaptive devices were introduced.

Recent technological advances also afford persons with physical limitations access to many learning experiences that heretofore were inaccessible. Related service personnel combine knowledge of the child and the environment to apply technology to developmental needs. Microswitches are especially useful for classrooms, because they can be attached to body parts, toys, or computers and can provide immediate reinforcement or feedback regarding behavior (York, Nietupski, & Hamre-Nietupski, 1985). For example, Maloney and Kurtz (1982) connected a mercury switch secured on the head to a cassette tape player, so that when the student kept the head erect, music would play. Only some of the subjects showed changes with this contingency. Similar findings occurred in studies by Walmsley, Crichton, and Droog (1981) and Leiper, Miller, Lang, and Herman (1981). In each case, 3 of 5 subjects improved head control with auditory feedback. Perhaps this technique would be more effective if it were incorporated into a goal-directed learning activity to provide a functional purpose for holding the head up. Horn and Warren (1987) provided a pilot test of this possibility by successfully teaching two toddlers with multiple handicaps to activate a mechanical toy, rather than using music.

The studies reviewed in this section provide very preliminary evidence that carefully designed therapeutic interventions can affect skill acquisition. As effective interventions are demonstrated, professionals must establish a plan for incorporating this knowledge into practice. As a related service, therapists must implement strategies with demonstrated success and create and evaluate new strategies, with special emphasis on those that can be incorporated into preschool and home activities. Collaboration with teachers and other team members provides an excellent mechanism for establishing the relevance and applicability of the strategy. Since further evidence is still needed, careful documentation of integrated related service efforts can be used to further clarify the issues. Familiarity of educators with the expertise of occupational and physical therapists, as well as awareness of the contribution of related service expertise to functional performance, will facilitate the process as well.

Support for Practice, Research, and Policy Development

As more young children with neurological impairments attend community preschool programs, it is likely that occupational and physical therapy services will be more commonplace in these centers. It is important for educators to understand the specialized expertise offered by these related service professionals, so that appropriate referrals and successful collaboration can occur to meet the children's specialized needs. The goal of these efforts must be to consider the child as a whole person ready to engage in age-appropriate activities within these environments, rather than as a child with motor, sensory, or cognitive difficulties. Professionals must actively study the hypothesis that integrating therapeutic techniques into naturally occurring activities will produce more generalizable outcomes than isolated strategies might produce. Although initial evidence indicates that this hypothesis is correct, much more evidence is needed to substantiate these findings and to further clarify the parameters that create the most successful outcomes. Professionals must be willing to both plan innovative intervention strategies and document outcomes of the intervention process as one mechanism for analysis and interpretation of findings.

Formal research is needed in several areas. Efficacy studies are needed to clarify which strategies yield optimal functional outcomes. Theory testing is needed so that decision-making frameworks can be constructed. Studies examining attitudes toward various intervention approaches will enable professionals to create strategies that will be used in natural contexts. Many research designs can be used to address these concerns.

First, naturalistic, or qualitative, studies are needed (Odom & Shuster, 1986; Schmid, 1981; Stainback & Stainback, 1984). As Odom and Shuster (1986) state, "A naturalistic investigator attempts to capture the behavior of individuals in every day (i.e., natural) settings and view the world 'through the eyes' of the individuals in those settings. The emphasis is to capture the whole of a phenomenon in question. . . " (p. 70). Participant observation and interviews are common qualitative techniques (Odom & Shuster, 1986; Schmid, 1981). Studies that produce clear descriptions of the complex patterns of behavior that occur as children evolve from dependence

Referral complaint[a]	Possible adaptations[b]
Poor lunch skills/behaviors	• Provide a wheeled cart to carry lunch tray • Provide large-handled utensils • Clamp lunch tray to table to avoid slipping • Serve milk in sealed cup with straw
Poor toileting skills	• Provide a smaller toilet • Provide looser clothing • Provide a step stool for toilet/sink
Can't stay in seat; fidgety	• Allow student to lie on floor to work • Allow student to stand to work • Provide lateral support to hips or trunk (e.g., rolled towels) • Adapt seat to correct height for work • Be sure feet are flat on floor when child is seated • Provide more variety in seatwork
Clumsy in classroom/halls; gets lost in building	• Move classroom furniture to edges of room • Send student to new locations when halls are less crowded • Provide visual cues in hall to mark locations • Match student with partner for transitions
Can't get on or off bus independently	• Allow student to back down stairs • Provide additional, smaller steps
Can't get jacket/coat on/off	• Place in front of student, in same orientation each time • Provide larger size for easier handling
Drops materials; can't manipulate books, etc.	• Place tabs on book pages for turning • Provide small containers for items • Place all items for one task on a lunch tray
Poor attention, hyperactive, distractible	• Decrease availability of distracting stimuli (e.g., visual or auditory) • Provide touch cues only when student is prepared • Touch student with firm pressure • Provide frequent breaks in seatwork
Poor pencil/crayon use	• Use triangle grip on pencil/crayon • Use fatter writing utensil • Provide larger sheets of paper • Provide paper without lines • Provide paper with more widely spaced lines
Poor cutting skills	• Provide adapted scissors • Provide stabilized paper (e.g., tape it down, use large clips, C-clamps)
Unable to complete seatwork successfully	• Provide larger spaces for answers • Give smaller amounts of work • Put fewer items per page • Give more time to complete task • Change level of difficulty
Loses personal belongings; unorganized	• Make a map showing where items belong • Collect all belongings and hand them out at the beginning of each activity
Doesn't follow directions	• Provide written or picture directions for reference • Provide cassette tape of directions • Allow student to watch a partner for cues

Figure 1. Classroom adaptations to be considered for common related service referral complaints prior to comprehensive assessment. [a]More serious problems usually require immediate involvement of the occupational and/or physical therapist. [b]If these strategies are unsuccessful, involvement of the occupational or physical therapist is appropriate.

to independence are needed, and can be adequately addressed through qualitative methods. A great deal of collaboration is necessary in qualitative studies to be sure that as data are collected, definitions are consistently applied to settings, behaviors, and persons. However, Schmid (1981) cautions: "Qualitative research methodologies are not compatible with all research questions, but the fact that this research approach is available enables the researcher to ask questions concerning the complexity of human phenomena" (p. 106).

Other authors believe that single subject designs also provide an opportunity to systematically observe and record changes in behavior (McReynolds & Thompson, 1986; Ottenbacher & York, 1984). The advantages of single subject designs include mechanisms for continuous assessment, the ability to alter intervention based on ongoing interpretation of data, and the ability to study heterogeneous problems without contaminating findings. Single subject designs can successfully be applied to intervention studies within natural environments, and therefore are manageable for teachers and therapists (Ottenbacher, Johnson, & Hojem, 1988).

Siegel and Young (1987) argue that classic group designs can be applied to intervention efficacy with success equal to that obtained via single subject designs. They argue that although many focus on the statistical results of group comparisons, interpretation of behavioral [illegible] study results are also appropriate. Interactions among variables within the study frequently play a significant role in the outcomes. Generalizability of findings from a significant group outcome is sometimes more possible than from a very specialized case. Group designs can be used to identify more effective strategies among choices available. A confluence of ideas from all of these research strategies will assist professionals in creating successful learning environments for children (Dunn, in press).

Voeltz and Evans (1983) suggest that three major questions must be addressed in order to adequately address the efficacy of intervention programs. First, professionals must ask: Has the behavior changed, and is that change a result of the intervention? Pretests, baseline data collection, and ongoing behavior probes are common methods used to address this question. Second, the professional must ask whether the intervention was carried out as it was designed. Multiple levels of activity occur simultaneously in educational settings; subtle variables not noted overtly in intervention plans can have a great impact on outcome. Qualitative studies that clearly describe the environmental variables supporting or inhibiting performance are useful in this case. Third, the professional must ask whether the behavior is meaningful and useful in natural environments. This area of inquiry may be the most critical and yet is also the most difficult to address. There are no formal instruments for measuring usefulness; professional and person judgment are necessary and are undoubtedly partially based on cultural trends and experience. A confluence of ideas from all of these research strategies will assist professionals in creating successful learning environments for children (Dunn, in press).

Measurement is another issue that must be addressed. Instruments that more accurately measure behaviors leading to outcome performance are needed. For example, acquisition of developmental milestones is not an adequate measurement of change in children with neurological impairments because these children do not acquire developmental milestones the way other children do. Better measurement techniques will enable professionals to know both when success is occurring and when a strategy is failing and needs to be altered. Campbell and Stewart (1986), Barnes (1986), and Ray, Bundy, and Nelson (1983) provide examples of alternate forms of measurement. In each case, clear operational definitions were used to record changes in the quality of performance as the child approximated the target behavior.

Policy changes will be necessary to support the use of integrated related services within preschool programs. First, persons must actively embrace the provision of services to preschoolers within community settings. Programs for typical children routinely offer activities that can be used to enrich the experiences of children with neurological impairments. Second, policies must support a new concept of the use of professional time. Integrated related services require much more flexibility in scheduling and a larger portion of adult interaction time. This is especially critical in programs that contract for a therapist's time. Contracts that only reimburse the therapist for time spent directly with children contain an implied message that administrators support an isolated model of service provision, and contact with the teacher is unimportant. For a successful integrated service model, all team members must contribute to the decisions about how time will best be spent (Dunn, in press).

On a larger scale, preservice and continuing education for professionals must begin to incorporate integrated experiences into learning opportunities. Although specialized knowledge is necessary, lack of experience in problem solving with other professionals fosters a continuation of isolated approaches to intervention. Professionals must learn from one another in order to appreciate the contributions made by other points of view. Practitioners and researchers also must begin to present papers and submit journal articles to professional publications and conferences of other disciplines or collaborate on joint projects as other mechanisms for sharing knowledge (Dunn, in press).

Services for young children are more comprehensive than they were a decade ago. But professionals must continue to be diligent in their efforts to improve service provision. Integrating related services is the challenge of today; perhaps this will be as commonplace in the next decade as keeping children out of institutions and in communities is today.

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Notes

1. Although the term *integration* generally refers to programs that serve children with handicaps and typical children together (as used in the above paragraph), integrated services in the following discussion will represent the blending of approaches from various disciplines to create an intervention that addresses the needs of the whole child within the natural environment (e.g., home or preschool).

2. The author acknowledges that some professionals use the term *functional* in a more technical context than is being used here. These professionals use the term *functional* to refer to the actual relationships that exist between a behavior and an environmental condition. For example, successful activation of a microswitch with a body part yields a "functional effect" from this point of view. In this paper, the term addresses the utility of the behavior for the individual. Thus the ability to activate the microswitch with a specified movement would have to be placed within an age-appropriate, goal-directed activity to meet the criterion used in this paper.

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Service Provision

For many years, occupational therapists limited their intervention strategies to a one-to-one direct service model of service provision. Although this is an effective method for providing services, it is not the only model of service provision available to the school based occupational therapist. In fact, there are many situations within the public school, that a direct service approach will not address the presenting problem. For example, when a student is falling out of his chair, it may be necessary to adapt the chair and table to fit the student's body; provision of direct services to increase postural control will never completely solve the problem.

Occupational therapists must embrace a wide range of service provision options, and they must develop systematic strategies for making decisions about when a particular model or approach is the appropriate choice. The next two entries provide information about the service provision process. The first entry is an article which introduces the basic models of service provision which are recommended by the American Occupational Therapy Association. The second entry is a chapter of a pediatric textbook which extends the models of service provision into exact intervention strategies, and offers a decision-making process for determining which situations warrant the use of each intervention strategy. These are both very useful references to extend the occupational therapist's knowledge and skills in school-based practice.

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Models of Occupational Therapy Service Provision in the School System

Winnie Dunn

Key Words: intervention process, occupational therapy • public schools

Occupational therapy is a related service when provided within the public schools, which means that services must enhance or support educational goals. Three service provision models have been described for school therapists: direct service, monitoring, and consultation. Direct service addresses individualized needs that require specialized intervention strategies which can safely be performed only by the occupational therapist. Monitoring, which is sometimes referred to as integrated programming, *uses therapeutic expertise within functional tasks to maximize opportunities for practice and generalization. Consultation addresses problems by enabling others to work more effectively on the educational goals they have set for the students. Evidence is accumulating to demonstrate that each model is effective when chosen and applied appropriately. This paper reviews each model, provides examples of studies that have been conducted, and suggests directions for future research.*

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This article was accepted for publication June 11, 1988.

The passage of Public Law 94-142 in 1975 (the Education for All Handicapped Children Act), in which occupational therapy was identified as one of several related services for school-age children, introduced both a new role and a new practice environment to the occupational therapist. The law's mandates challenged pediatric occupational therapists to focus their role on providing only those therapeutic approaches that would enhance a student's educational experience. In other words, occupational therapy intervention in schools must enhance or support the student's educational goals. The interventions and goals are written in the student's individualized education program (IEP), a document that coordinates the goals of all professionals involved with the student.

Models of Service Provision

The American Occupational Therapy Association (AOTA) has long recognized the need for specialized skills to effectively provide occupational therapy services in the public schools. In 1980 AOTA provided in every state training programs that addressed the unique skills of public school service provision. These programs are set forth in *Training: Occupational Therapy Educational Management in the Schools* (TOTEMS) (Gilfoyle, 1980). More recently, a special task force was formed to review TOTEMS materials, compile materials from several states, collect comments from identified nationwide experts, and summarize the results of survey data to design comprehensive guidelines for occupational therapy services in the public schools. The task force defined three specific models of school-based occupational therapy service provision that will be referred to here (AOTA, 1987).

Each service provision model (direct service, monitoring, and consultation) is viable within the public schools. As was discussed in the article by Coutinho (see pp. 706–712 of this issue), the members of the interdisciplinary team must carefully identify the student's needs within the context of that student's educational placement, and choose service models for both special education and related services accordingly. The intent of Public Law 94-142 is that the type and amount of service provision may not be determined by parental wishes or district resource limitations such as space or personnel shortages, but rather by the student's needs alone. A broader understanding of the various service provision models will facilitate application of the appropriate service.

Direct Service

Direct service is the most familiar model of service provision. In this model, occupational therapy practitioners use specific techniques and approaches with one student or a small group of students, and generally have frequent contact with them (e.g., once or twice a week) (AOTA, 1987).

The most critical feature in choosing direct service is the identification of an educational need that can be met only by direct interaction between the student and the occupational therapist. The intervention chosen might include treatment techniques that depend on an in-depth knowledge of the neuromuscular system or the integrative functions of sensory, perceptual, and motor performance. A key factor might be the necessity for ongoing clinical judgments to adjust the activities to best meet the student's ongoing needs. In all cases, the intervention must have a direct relationship to the educational needs of the student.

A number of researchers have demonstrated the effectiveness of the direct service model on students' performance. Kuharski, Rues, Cook, and Guess (1985) found that vibration, inversion, and rotation techniques were effective sensory procedures for improving head and trunk control for classroom activities in three preschoolers with severe disabilities. Ottenbacher (1982) conducted a meta-analysis of studies that compared the outcome performance of direct service intervention using sensory integrative approaches with the performance of a control group and found that direct service intervention produced better outcomes more than 78% of the time. Ottenbacher, Short, and Watson (1981) investigated direct services with children who had severe disabilities by comparing a treatment and a control group on motor development and postural control. The children who received direct services made significantly greater gains than those who did not. Children with severe disabilities also made significant improvements in a study conducted by Sobsey and Orelove (1984). They used a reversal design to demonstrate that direct occupational therapy services produced better lip closure and less spilling from the mouth than routine classroom techniques.

However, some researchers have tested the limits of the direct service model. Jenkins et al. (1982) studied two intensities of direct service (once a week and three times a week for 15 weeks) with developmentally disabled children. They found that direct services produced improved gross motor skills in these children when they were compared with a control group, but that the two intensities of service did not differ from each other in the results they produced. The authors concluded that multiple sessions may not be necessary to produce developmental outcomes. More studies such as these are needed to determine the most efficient pattern of service provision.

Monitoring

The monitoring model of service provision requires diagnostic skills to identify student needs, program planning skills to design appropriate interventions, and teaching and supervisory skills to assist others in the immediate environment to carry out the procedures with the student. Regular contact (a minimum of twice a month) is needed to determine whether adjustments in the intervention procedures are necessary (AOTA, 1987). The occupational therapist continues to be responsible for outcomes, but entrusts another person with the regular implementation of the program plan. The most critical feature of monitoring is the identification of an educational need that will be best served by routine and consistent procedures needing ongoing guidance and practice. Activities of daily living, positioning and handling, reach and grasp, fine motor skill development, or coordination needs might be best served through monitoring. Three questions are asked to determine whether monitoring is a safe choice for a student: (a) Is the student's health and safety protected when the program is conducted by a person other than the occupational therapist? (b) Can the person being trained correctly demonstrate the activities without assistance? (c) Can the person being trained independently describe restrictions and signals of failure that would warrant discontinuation and making contact with the supervising therapist? (AOTA, 1987). If one cannot answer "yes" to all three questions, then monitoring is not the service model of choice, because a negative answer to any question would mean that monitoring would introduce a measure of risk into the service provision process.

Monitoring seems to be an effective means for service provision, perhaps because it provides an intuitive measure of validity and the possibility of good reliability through observation. Furthermore, empirical data on the effects of monitoring have demonstrated its value. Several authors have investigated integrated programming techniques, which incorporate the principles of monitoring discussed above (Campbell, 1987; Campbell, McInerney, & Cooper, 1984; Giangreco, 1986; Rainforth & York, 1987). For example, Giangreco (1986) found that when therapy techniques were incorporated into microswitch activation, the student performed at higher levels than when isolated direct services were provided prior to microswitch classroom activities. Campbell, McInerney, and Cooper (1984) incorporated neuromotor procedures into all reaching tasks performed during the school day by a preschooler with moderate disabilities, with therapists monitoring both correct application of the techniques and data collection. The child attained 65% competence in all activities, and attained 100% competence in more motivating activities, such as in activities carried out in a large group. They concluded that a combination of therapeutic and educational strategies may be the most effective approach to achieve student goals. Further research is needed to identify other successful integrative approaches that use occupational therapy expertise to facilitate functional skill development for learning.

Consultation

This service model is the least familiar to occupational therapists. As applied to occupational therapy in the schools, consultation is a service model in which specialized expertise is used to facilitate the workings of the educational system. Consultation in the educational environment is oriented toward the needs of (a) the student, (b) professionals, or (c) the system; in practice, these forms often occur together. *Case consultation* addresses the student's needs, focusing on developing the most effective educational environment for a specific student. *Colleague consultation* addresses the needs of other professionals to improve their skills and knowledge. *System consultation* improves the effectiveness of the agency or district by addressing the needs of generic groups within the system (AOTA, 1987).

The most critical factor in choosing consultation is the identification of an educational need that is most effectively met through a supportive environment. Designing proper seating, preparing an adaptive device for classroom use, suggesting alternate means for presenting or producing classroom work, or assisting with IEP goal development can all be considered examples of consultation. Consultation can be an effective means to create an environment that supports student learning, and offers the opportunity for the student to generalize his or her skills to different environments (Dunn, 1985).

Much of the writing on consultation comes from the medical literature, or from the literature on mental health, school psychology, and organizational development (Dunn, 1985; Idol & West, 1987; West & Idol, 1987). West and Idol (1987) reported on a composite definition of consultation from these bodies of literature that was originally designed by Meyers, Parsons, and Martin (1979). Several characteristics emerge: (a) Two persons interact, with one having the direct responsibility for a third person; (b) interactions are voluntary; (c) interactions are a shared problem-solving process; (d) the immediate goal is to solve a current problem of the person seeking consultation; and, (e) the long-range goal is to enable the person seeking consultation to handle future situations more skillfully. These characteristics clearly underline the importance of adult communication in producing successful outcomes from consultation.

West and Idol (1987) divided research on consultation in special education and related professions into three major areas: input, process, and output variables. Input variables include personal characteristics of the professionals and the problem to be addressed; process variables refer to the techniques used in the consultation process; and output variables are those observable results that emerge from the consultation. Methodological limitations and inadequate operational definitions were cited as the major reasons overall results have been inconsistent thus far.

Input variables have been given a small amount of attention in research (West & Idol, 1987). These, the most inwardly focused variables, are the most difficult to assess validly. For instance, the variable "years of teacher experience" yields inconsistent results when investigators look at frequency of consultation requests (Gutkin, 1980; Pryzwansky & White, 1983; West & Idol, 1987). Readiness for the consultation experience may be a factor related to the effectiveness of outcomes; this variable can include the expertise of the consultant as well as awareness, on the part of the person seeking consultation, of how the consultation process works. The consultant's personality and work traits, including flexibility, warmth and efficiency, are also important (Pryzwansky & White, 1983; West & Idol, 1987). More research is needed to clarify the role that input variables play in the success of consultation.

Only a few studies have investigated process variables. Even when teachers and administrators have been exposed to various consultation models, they overwhelmingly prefer the collaborative style of consultation (Babcock & Pryzwansky, 1983; West, 1984). Collaborative approaches use an equal partnership between the two individuals involved to identify, plan, and carry out recommendations. Both partners are then responsible for and committed to positive outcomes (Dunn, 1985). Effective collaboration can be time consuming, but may lead to more goals being met because of the commitment made by both parties.

Most research on consultation is being done on output variables. This research focuses on the changes, both in persons seeking consultation and in students, that are a direct result of consultation. Teachers receiving consultation have reported positive feelings about those experiences (Gutkin, 1980; West & Idol, 1987). Furthermore, teachers who received in-service training on consultation were thereafter observed to use consultation more often than a control group who did not receive this training (West & Idol, 1987). Peck and Killen (1987) found that preschool teachers provided their students with more opportunities to practice skills and got better outcome behaviors after consultation that focused on IEP treatment goals.

Consultation is a viable service provision alternative in the public schools because it provides a mechanism through which students have opportunities to practice skills and generalize what they have learned to different situations. Occupational therapy knowledge is used efficiently when it is applied through consultation approaches to adapt environments and alter teaching and learning strategies to facilitate better outcomes for the student. Occupational therapy research is needed to identify successful consultation methods and clarify what conditions must be present in order for consultation to be the service model of choice for specific situations.

Use of Service Provision Models

The art of service provision in the public schools is in choosing the model that would be the most appropriate to meet a student's educational needs. The American Occupational Therapy Association (AOTA, 1987) identified 10 parameters that help the therapist choose the best service model (see list below). These parameters are used to determine how important it is for the occupational therapist to be directly involved with the student, the teachers, and the environment. For example, if the teachers are experienced and knowledgeable about feeding and positioning, Parameter 7 would be ranked lower, suggesting that the occupational therapist might be better employed providing consultation or monitoring for classroom implementation. Parameter 6 (age of the student) is related to chronological age expectations; a student who is successfully meeting age expectations might require less direct intervention than one who fails at age-appropriate tasks. For example, a student may be coping with upper elementary school expectations with the help of adaptations, but may require direct intervention as he or she prepares for vocational training and placement. The assessment of all parameters leads to an impression of the entire situation, which in turn can assist the therapist in choosing an appropriate service model.

Parameters for Setting Priorities

1. Health and safety of the student
2. Necessity for external communication
3. Necessity for environmental modifications
4. Role of sensory, perceptual, and motor functions in the student's educational performance
5. Potential for functional improvement
6. Age of the student
7. Expertise of other persons in the student's environment to assist in the educational process
8. Availability of other persons in the student's environment to assist in the educational process
9. Level of interference of the handicapping condition
10. Availability of space, time, and equipment in the local education agency (AOTA, 1987, pp. 9-1–9-2)

Each model has benefits and limitations. Direct service is time consuming and therefore costly, but can address very complex problems and be quickly adapted to meet the student's changing needs. Monitoring is more time efficient, since others carry out the programs, but the student's health and safety must be considered. Consultation is an effective mechanism for providing ongoing environmental support, but requires special skills to be administered properly. A few brief examples will illustrate the use of each model.

Case Number 1: Use of Direct Service and Consultation

Tommy is a 9-year-old boy with an educational diagnosis of learning disability. His psychoeducational testing revealed above average intelligence, but he is performing poorly in school. He has a difficult time completing his work in the regular classroom, even though his classroom teacher is giving him work that is at his tested reading and math levels. The occupational therapy assessment revealed that Tommy was having difficulty understanding information from touch, position, and movement receptors, and had poor ability to organize body and hand movements. During testing and later classroom observation, the occupational therapist noted poor attention to task and difficulty in carrying out verbal directions, even though he could repeat directions. The therapist concluded that Tommy's related service needs might best be served through a combination of direct service and consultation. Direct service would address the poor sensory processing and difficulty with planning motor acts that seemed to be contributing to his poor organization of work, inattention to classroom tasks, and poor ability to carry out school tasks. Direct service seemed necessary because of Tommy's specialized sensory-motor needs. Consultation would be used to adapt his regular classroom, to help the teacher understand the reasons Tommy's problems were affecting his classroom performance, and to assist her with strategies to increase his performance capabilities in the classroom.

These recommendations were discussed at the IEP team meeting, and the team agreed that both direct service and consultation were appropriate approaches. They also recommended that the physical education teacher receive occupational therapy consultation, since Tommy had trouble performing physical acts and frequently became angry because of this frustration. This component was then added to the IEP.

Case Number 2: Use of Monitoring

Cassie is a 6-year-old girl with an educational diagnosis of educable mental retardation and a medical diagnosis of Down syndrome. An assessment revealed strengths in cooperation, social skills, and some matching skills (e.g., colors, shapes), and concerns in motor skills postural control, muscle tone, and daily living skills. After reviewing the records and conducting an occupational therapy assessment, the therapist examined Cassie's educational environment (a self-contained classroom), which was staffed with an experienced special educator and teacher's aide and had a routine curriculum focus of developmental and daily living skill development. The occupational therapist determined from all the information available that Cassie's related service needs would best be served through a monitored program with the teacher and teacher's aide. At the IEP team meeting, this recommendation was discussed, and the team agreed that the teachers and the occupational therapist would meet bimonthly to review the motor development and daily living skills programs designed by the therapist to determine whether changes needed to be made and to discuss activities for the next time period.

Case Number 3: Use of Consultation

Kurt is a 17-year-old student whose physical performance is slow as a result of cerebral palsy. He has received special education and related services for various learning needs throughout his school career. He has been in a vocational readiness program in conjunction with his high school program, and he is now ready to be placed in a work environment. The educational team is concerned that without some preplacement preparation and environmental adaptations, Kurt will have a difficult time succeeding in his work placement even though he has demonstrated the necessary skills to do so in the educational setting. The occupational therapist set up consultation with the prospective employer to prepare both the workers and the environment for Kurt's arrival. After Kurt begins work, the supervisor, Kurt, and the therapist will meet once a week for the first month and then once a month for the rest of the school year to solve new problems that might arise.

The above examples depict only some of the combinations of service provision that might be necessary to meet a student's needs. The IEP team is responsible for the final decisions regarding programming, although the team must rely heavily on recommendations from the group members in order to make those decisions. All team members must be able to step back from their discipline's perspective to see the overall needs of the student when planning the most appropriate program, keeping educational goals in mind.

Conclusion

The AOTA 1985 manpower study revealed that in 1982, one third of employed occupational therapists worked in pediatrics, with many of these holding jobs in public schools. With the recent passage of Public Law 99-457 (the Education of the Handicapped Act Amendments of 1986), infants, preschoolers, and their families will also be eligible for occupational therapy services. To meet these demands, occupational therapy will need to devise successful strategies for implementing all of the service provision models discussed here. Under the auspices of AOTA, Henderson et al. (1987) have collected data to compare the type of educational and fieldwork experiences available to occupational therapists with those competencies that practicing clinicians deem necessary for successful service provision in public schools. The results of this study will be used to further delineate the characteristics of successful occupational therapy service provision in schools and appropriate preservice experiences for school-based occupational therapists.

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SIX

Designing Pediatric Service Provision

> *"Most districts employ a variety of specialists to assist in the screening, evaluation, and placement of students with disabilities, as well as with the provision of related services. These specialists are typically from a variety of disciplines and include psychologists, special educators, communication specialists, adaptive physical education teachers, and physical and occupational therapists. A decentralization of service provision inevitably will affect their roles. Specialists who work in a consultative role will be affected the least. However, specialists who have provided pull-out therapy services to students assigned to various special education classrooms will need to make more significant adjustments. Preliminary indications suggest that the type of adaptations necessitated by the dispersion of previously segregated programs to regular education buildings are at least as effective and may well be advantageous to the amount and quality of services students receive (McDonnell, 1987). A willingness to learn new patterns for providing services to students will be required by specialists as they apply their expertise in new organizational models." (McDonnell & Hardman, 1989, p. 68)*

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Philippa H. Campbell, P[illegible]OTR

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Pediatric therapy services are provided for children of different ages and with varying degrees of disability. Pediatric therapists respond to the needs of children, when providing services, by considering variables related to disability as well as environmental factors. Service provision is a fluid process that requires ongoing decision-making. This chapter outlines a framework for assisting therapists to make service provision decisions that are in the best interest of children and their families. Frameworks for decision making provide a mechanism against which decisions may be evaluated. The immediate and long-term impact of service provision decisions is determined more easily when guided by an overriding framework.

Pediatric service provision begins with an individualized plan that states desired outcomes. This plan may be an Individualized Family Service Plan (IFSP), an Individualized Education Program (IEP), an Individual Habilitation Plan (IHP), or some other similar type of service provision plan. The type of plan used to guide services is dependent upon a child's age and the agency responsible for planning and providing services.

Figure 6-1 illustrates the relationship among assessment, program planning, service provision, and evaluation. Therapists define the focus of service provision on the basis of a wide variety of data that are obtained through assessment (see Chapter Three). These data are discussed by team members to determine program outcome priorities (see Chapter Five). Therapists assist children in achieving program outcome priorities within a variety of settings, by using direct, monitoring, and consultative strategies. These services are outlined on an intervention plan that guides the provision of specific therapy services and provides the basis by which therapists document and evaluate the effects of those services.

Many children, particularly infants and toddlers, receive services through more than one agency or service provider. These services require coordination if resources are to be utilized effectively. In some cases, families perform service coordination roles for their children, while case managers may share, or totally provide coordination in other instances. Professionals contribute to the coordination process by ensuring that all services facilitate attainment of desired outcomes. Therapists who provide services through hospitals, clinics, or private practices may not have opportunities to contribute directly to early intervention or school program team decisions, but, like all other interagency team members, are responsible for ensuring that therapeutic activities support and enhance a child's acquisition of desired outcomes.

Linking Assessment With Intervention

Occupational therapy services are provided within age-appropriate life tasks and the environments within which those tasks are performed. Services are based on performance outcomes under the categories of: activities of daily living (ADL), work, and play/leisure. Various sensorimotor, cognitive and psychosocial performance components enable or block performance of ADL, work, or play/leisure activities. These outcome performance areas and performance components are illustrated in Figure 6-2, a grid that is based on the American Occupational Therapy Association (AOTA) *Uniform Terminology for Occupational Therapy—Second Edition* (1989). Occupational therapy assessment is directed towards identifying strengths and concerns in these performance components, and their effect on an individual's performance of ADL, work, and play/leisure outcomes. The grid is used to guide design of occupational therapy intervention programs. The performance areas are listed across the top of the grid, while the performance components are listed down the side of the grid. Areas in need of intervention emerge when the therapist identifies strengths and concerns in the performance components, as related to performance of functional life tasks. This information is used to create an intervention plan that utilizes strengths, while focusing on areas of concern. Outcomes of independence in ADL, work, and/or play/leisure are the result of intervention planning.

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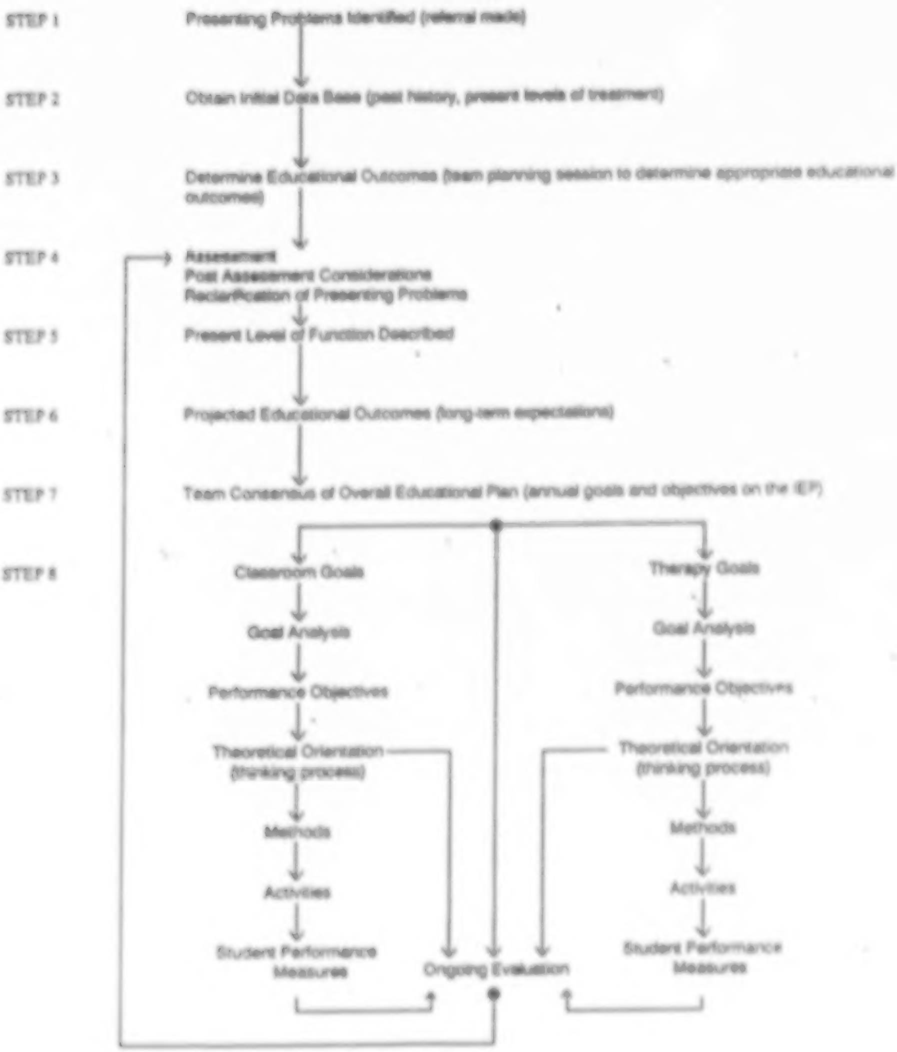
**Flow Sheet for Program Planning
for Students with Severe Handicaps**


STEP 1
Presenting Problems Identified (referral made)
STEP 2
Obtain Initial Data Base (past history, present levels of treatment)
STEP 3
Determine Educational Outcomes (team planning session to determine appropriate educational outcomes)
STEP 4
Assessment
Post Assessment Considerations
Reclarification of Presenting Problems
STEP 5
Present Level of Function Described
STEP 6
Projected Educational Outcomes (long-term expectations)
STEP 7
Team Consensus of Overall Educational Plan (annual goals and objectives on the IEP)
STEP 8
Classroom Goals
Goal Analysis
Performance Objectives
Theoretical Orientation (thinking process)
Methods
Activities
Student Performance Measures
Therapy Goals
Goal Analysis
Performance Objectives
Theoretical Orientation (thinking process)
Methods
Activities
Student Performance Measures
Ongoing Evaluation

[1] Dunn, W., & Campbell, P., 1989 (adapted from Dunn, W., 1987)

Figure 6-1

PERFORMANCE AREAS

UNIFORM TERMINOLOGY GRID PERFORMANCE COMPONENTS	ACTIVITIES OF DAILY LIVING Grooming	Oral Hygiene	Bathing	Toilet Hygiene	Dressing	Feeding and Eating	Medication Routine	Socialization	Functional Communication	Functional Mobility	Sexual Expression	WORK ACTIVITIES Home Management	Care of Others	Educational Activities	Vocational Activities	PLAY OR LEISURE ACTIVITIES Play or Leisure Exploration	Play or Leisure Performance
A. SENSORIMOTOR COMPONENT 1. Sensory Integration																	
a. Sensory Awareness																	
b. Sensory Processing (1) Tactile																	
(2) Proprioceptive																	
(3) Vestibular																	
(4) Visual																	
(5) Auditory																	
(6) Gustatory																	
(7) Olfactory																	
c. Perceptual Skills (1) Stereognosis																	
(2) Kinesthesia																	
(3) Body Scheme																	
(4) Right-Left Discrimination																	
(5) Form Constancy																	
(6) Position in Space																	
(7) Visual-Closure																	
(8) Figure Ground																	
(9) Depth Perception																	
(10) Topographical Orientation																	
2. Neuromuscular a. Reflex																	
b. Range of Motion																	
c. Muscle Tone																	
d. Strength																	
e. Endurance																	
f. Postural Control																	
g. Soft Tissue Integrity																	
3. Motor a. Activity Tolerance																	
b. Gross Motor Coordination																	
c. Crossing the Midline																	
d. Laterality																	
e. Bilateral Integration																	
f. Praxis																	
g. Fine Motor Coordination/ Dexterity																	
h. Visual-Motor Integration																	
i. Oral-Motor Control																	

Figure 6-2

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PERFORMANCE AREAS

UNIFORM TERMINOLOGY GRID PERFORMANCE COMPONENTS	ACTIVITIES OF DAILY LIVING Grooming	Oral Hygiene	Bathing	Toilet Hygiene	Dressing	Feeding and Eating	Medication Routine	Socialization	Functional Communication	Functional Mobility	Sexual Expression	WORK ACTIVITIES Home Management	Care of Others	Educational Activities	Vocational Activities	PLAY OR LEISURE ACTIVITIES Play or Leisure Exploration	Play or Leisure Performance
B. COGNITIVE INTEGRATION AND COGNITIVE COMPONENTS																	
1. Level of Arousal																	
2. Orientation																	
3. Recognition																	
4. Attention Span																	
5. Memory																	
a. Short-term																	
b. Long-term																	
c. Remote																	
d. Recent																	
6. Sequencing																	
7. Categorization																	
8. Concept Formation																	
9. Intellectual Operations in Space																	
10. Problem Solving																	
11. Generalization of Learning																	
12. Integration of Learning																	
13. Synthesis of Learning																	
C. PSYCHOSOCIAL SKILLS AND PSYCHOLOGICAL COMPONENTS																	
1. Psychological																	
a. Roles																	
b. Values																	
c. Interests																	
d. Initiation of Activity																	
e. Termination of Activity																	
f. Self-Concept																	
2. Social																	
a. Social Conduct																	
b. Conversation																	
c. Self-Expression																	
3. Self-Management																	
a. Coping Skills																	
b. Time Management																	
c. Self-Control																	

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Figure 6-2. *Continued*

Functional Assessment and Program Planning

Deciding when a child requires intervention, and how that intervention will be provided, are two of the most difficult decisions in the service provision process. Table 6-1, Functional Assessment Parameters, reorganizes the components and areas of the Uniform Terminology grid, to focus on those outcome categories that are most relevant for children (Column 1). Second, the detailed list of performance components are reorganized into functional groups (Column 2) that pertain to each outcome area. These performance components are not listings of all aspects within a particular outcome category, but include those most likely to be addressed by therapy personnel. Therapists use these parameters to synthesize assessment information and to provide information used in the team planning process to determine desired outcomes.

Performance outcome categories include: learning (skill acquisition and educational activities), work, play/leisure, communication, socialization, and activities of daily living. The outcome areas represented are those that are important for infants, toddlers, children, and youth. However, all areas are not necessarily relevant for all children at all chronological ages. In addition, other outcome areas such as mobility and positioning are represented as performance components within outcome areas. For example, postural control and positioning are included in relation to individual outcome areas to focus not just on positioning, but on management of body position for a specific functional outcome, such as communication. Similarly, mobility skills are targeted within outcome areas to emphasize the importance of mobility within particular performance environments.

Occupational and physical therapists provide primary information to the team regarding sensorimotor components of performance. Occupational therapists also provide information about the cognitive and psychosocial components of performance, but may not be the only professionals contributing intervention strategies to resolve concerns in these areas. A goal of occupational therapy is to enable performance of functional outcomes rather than to improve isolated skills. Pediatric therapists have an obligation to ensure that their service provision is designed to have an effect on desired program outcomes. Team members collaborate to determine which program outcome(s) are appropriate for an individual child, so that everyone is working towards identical outcomes. Individual team members may offer their points of view, but decisions about overall outcomes are made collectively by team members. The outcome categories and performance components outlined on this table make the unique contributions of therapy clear to all team members, and also direct a therapist's focus toward team-determined program outcome(s) (column 1 of Table 6-1).

Functional Skills Assessment Grid

Figure 6-3 illustrates a grid that is used to make decisions about service provision in pediatric settings. Children's abilities in each performance component are graded using a five-level scale that reflects the degree of influence

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TABLE 6-1. Functional Assessment Parameters

Occupational therapists address the student's needs within program goals. Therapists do not address program goals in isolation nor do they address *all* components of a goal. Rather, they contribute expertise to enable the individual to benefit from the over-all program and achieve the program goals. For example, occupational therapists do not achieve communication outcomes alone, but rather contribute specific skills which enable the individual to gain access to communication possibilities. The individual needs addressed by occupational therapists in each area are listed below.

Program Goals	**Performance Components**
Learning: Skill acquisition and academics	1. manipulation/hand use 2. interpretation of body senses 3. perceptual skills e.g.: organization of space and time interpretation of visual stimuli 4. cognitive skills e.g.: problem solving generalization of learning 5. attending skills 6. use of assistive and adaptive devices 7. management of body position during learning 8. management of body position during transitions 9. movement within individual's learning environment
Work*	1. management of body position during work 2. management of body position during transitions 3. movement within individual's work environment 4. manipulation/hand use 5. use of assistive and adaptive devices
Play/Leisure*	1. management of body position during play/leisure 2. management of body position during transitions 3. movement within play/leisure environment 4. manipulation/hand use 5. use of assistive and adaptive devices
Communication*	1. oral motor movements 2. communication access 3. manipulation/hand use 4. management of body position during communication 5. movement w/in individual's communication environment 6. attending skills 7. perceptual skills 8. use of assistive and adaptive devices
Socialization*	1. self esteem 2. recognition and use of nonverbal cues 3. management of body position during socialization 4. movement within individual's social environment 5. attending skills 6. perceptual skills 7. cognitive skills
Activities of daily living*	1. oral motor movements 2. management of body position during ADL 3. movement within daily living environment 4. attending skills 5. manipulation/hand use

*When acquiring a new skill, learning components apply to the task.

Dunn, W. & Campbell, P. (1988).

of performance on program outcomes. Therapists use assessment information to assign rating scores to children's performance of components within each outcome category area. The levels allow therapists to classify children's performance on a continuum, ranging from no evidence of difficulty ("NA") to severe difficulties which prevent performance of program outcomes ("3"). The second level ("0") is used when a therapist has identified a deficiency in a performance component which is not interfering presently with the desired program outcome(s). A score of "1" defines an identified deficiency which *influences* a child's successful performance of a program outcome(s), where "2" is used to describe a deficiency which *interferes* with performance. A score of "3" is used when deficiencies *prevent* performance in one or more program outcomes. Specific programs operationalize these phrases for their settings.

The grid illustrated in Figure 6-4 was completed for a child for whom the team targeted program outcome categories of communication and ADL. Toby, a seven-year-old child with cerebral palsy, who attends second grade in a regular elementary school, eats lunch in the cafeteria. Oral motor movements are not influencing his ability to communicate, because he uses an augmentative communication system. He has difficulty chewing and swallowing his food as a result of oral motor movement dysfunction. The therapist translated assessment information onto the Functional Skills Assessment Grid (Figure 6-4) and rated performance in oral motor movements under Communication as "0" and under ADL as "2."

Therapists may identify concerns regarding performance components that do not influence, interfere with, or prevent performance of program outcomes (scores of "0"). In these instances, therapists inform both the family and the school district or agency responsible for services. The family has the right to know that a concern has been identified and to be given guidance about their options for addressing the concern. If the problem is not affecting a child's performance of a program outcome within a school district program, the school does not have responsibility for addressing the area of concern. When an occupational therapist is working on behalf of a school district, (s)he must work within the parameters of that agency in providing therapy services. Statements made to the family must make it clear that the identified concern may be addressed at the parent's discretion, since attainment of educational program goals is not affected. It is appropriate to offer suggestions of community resources to deal with the concern. These suggestions may be simple (e.g., karate, gymnastics or swimming lessons for a child with incoordination) or more complex (e.g., referral to a community therapist). Many school districts and other agencies have designed policies for situations such as this one. It is important to know the policies of the agency before discussing concerns with families.

Any of the performance components that are rated "1", "2", or "3" on the grid are addressed in the service provision process. Three interrelated issues concerning service provision for children are incorporated into the decision-making that guides implementation of services. The first issue centers around

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FUNCTIONAL SKILLS ASSESSMENT GRID
for Occupational and Physical Therapy Services

PROGRAM OUTCOME	PERFORMANCE COMPONENTS	NA	0	1	2	3	COMMENTS
Learning* skill acquisition and academics	1 Manipulation/hand use						
	2 Interpretation of body senses						
	3 Perceptual skills organization of space and time						
	interpretation of visual stimuli						
	4 Cognitive skills problem solving						
	generalization of learning						
	5 Attending skills						
	6 Use of assistive and adaptive devices						
	7 Mgmt of body positions during learning						
	8 Mgmt body positions during transitions						
	9 Mvmt w/in learning environment						
Work*	1 Mgmt of body positions during work						
	2 Mgmt of body positions during transitions						
	3 Mgmt w/in work environment						
	4 Manipulation/hand use						
	5 Use of assistive and adaptive devices						
Play/Leisure*	1 Mgmt body position during play/leisure						
	2 Mgmt body position during transitions						
	3 Mvmt w/in play/leisure environment						
	4 Manipulation/hand use						
	5 Use of assistive and adaptive devices						
Communication*	1 Oral motor movements						
	2 Communication access						
	3 Manipulation/hand use						
	4 Mgmt body pos. during communication						
	5 Mvmt w/in communication environment						
	6 Attending skills						
	7 Perceptual skills						
	8 Use of assistive and adaptive devices						
Socialization*	1 Self esteem						
	2 Recognition and use of nonverbal cues						
	3 Mgmt. body position during socialization						
	4 Mvmt w/in social environment						
	5 Attending skills						
	6 Perceptual skills						
	7 Cognitive skills						
Activities of daily living*	1 Oral motor movements						
	2 Mgmt of body position during ADL						
	3 Mvmt w/in daily living environment						
	4 Attending skills						
	5 Manipulation/hand use						

Dunn, W. & Campbell, P. (1988).
*When acquiring new skills, use the learning: skill acquisition section of this grid.

NA—No problems are identified in therapy evaluation.
0—Although a problem has been identified through evaluation, it is not presently interfering with program outcome(s). Needs may be met by self, parents, or professionals in other programs or agencies.
1—The problem *influences* successful program outcome(s); simple instructional or environmental changes are likely to result in functional performance.
2—The problem *interferes* with specific program outcome(s); specific strategies are necessary to enable functional performance.
3—The problem *prevents* successful program outcome(s), multifaceted strategies are necessary to reach functional performance.

Figure 6-3.

FUNCTIONAL SKILLS ASSESSMENT GRID
for Occupational and Physical Therapy Services

PROGRAM OUTCOME	PERFORMANCE COMPONENTS	NA	0	1	2	3	COMMENTS
Communication	1 Oral motor movements		X				
	2 Communication access						
	3 Manipulation/hand use						
	4 Mgmt body pos. during communication						
	5 Mvmt w/in communication environment						
	6 Attending skills						
	7 Perceptual skills						
	8 Use of assistive and adaptive devices						
Activities of daily living*	1 Oral motor movements				X		
	2 Mgmt of body position during ADL						
	3 Mvmt w/in daily living environment						
	4 Attending skills						
	5 Manipulation/hand use						

Figure 6-4.

the overall purpose and focus of service provision. Services may be provided to prevent the development of future and/or secondary disabilities, remediate identified deficiencies, or compensate for deficiencies that cannot be addressed adequately through remedial intervention. The second issue concerns the model of service provision that will be used to address child needs, including direct service, monitoring, and consultation models. The third issue involves decisions about the locations in which services will be provided. Each of these issues are interrelated in that decisions made about one aspect of service provision impact on other aspects. For example, a compensatory approach is the most likely service provision option to facilitate access of a teenager with severe disabilities to a work program. These particular services are best provided through consultation at the work site. By observing the teenager's performance in the work environment, the therapist is more likely to design appropriate compensatory strategies that can be taught to job site personnel to facilitate the teenager's performance of the work task.

Determining the Focus of Occupational Therapy Services

Pediatric therapists collaborate with family and professional team members to determine the overall focus of services, and to select the focus that will be most effective for a child. Therapists may choose a remedial, compensatory, or prevention-intervention focus (Campbell, 1989; Campbell, in press; Dunn, Campbell, Oetter, Hall, Berger, & Strickland, 1989). A prevention-intervention focus is used when services are designed to prevent or alleviate the effects of biological or environmental factors on the developmental process. This approach recognizes the interdependency of the various areas of development on each other and on the integrity of the system as a functional unit. For example, early intervention team members decided to use a prevention-intervention approach with a 10-month-old with extremely low tone, that re-

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sulted in poor antigravity control of the head and trunk. In order to prevent delayed cognitive development, adaptive seating equipment was designed to hold the infant's head and trunk up against gravity so that the arms could be used to manipulate objects.

A remedially focused approach is implemented when the purpose of intervention is to improve functional abilities in areas of dysfunction. If the early intervention team had selected a remedial, rather than a prevention-intervention, approach for the 10-month-old described above, emphasis would have been placed totally on improving the infant's head and trunk control, without specific regard for the impact of delays in postural control on other areas of functioning. Use of a remedial approach assumes that the targeted weakness or area of concern may be made "normal" through intervention. A therapist who uses a range-of-motion intervention to lengthen shortened muscles has selected a remedial approach for intervention.

A compensatory focus is chosen when the problem area cannot be substantially changed, regardless of the intervention strategies that are used. Compensatory approaches minimize the effect of the disabling condition, to allow a child to participate in other life experiences that may otherwise not be possible. Assistive and adaptive devices are frequently used to compensate for physical inabilities that are unlikely to be fully remediated through existing therapeutic strategies. A compensatory focus may be used by itself or as a means of preventing the development of secondary problems. A child, for example, may be provided with adaptive eating devices to become independent in self-feeding, despite the existence of inability to perform performance component skills, such as grasping or pronation/supination.

Determining when prevention-intervention, remedial, or compensatory focuses are in the best interests of the child may be difficult to judge. Prevention-intervention or promotion approaches are used most often in early intervention, where remedial and compensatory approaches are more often used as the basis for service provision for school-age students. Table 6-2 provides a

TABLE 6-2. Service Provision Approaches

Variable	Remedial	Compensatory	Prevention Intervention
Does student function within chronological age zone?	yes (CA +/−9 mo)	no (CA > age zone)	no (CA < age zone)
How *essential* is the skill component for functional outcomes?	essential (e.g., reaching)	enhancing (e.g., walking)	essential (e.g., manipulation)
How *necessary* is the outcome for overall life function?	broadens life function (e.g., playing)	critical to life function (e.g., eating)	critical (e.g., communication)
At what levels do the identified problems interfere with performance	intermittently or partially interfere	greatly (blindness)	greatly (projected) (low muscle tone)

TABLE 6-3. Combined Use of Service Provision Models and Approaches

	Direct	Monitor	Consult
Remedial	Improve head control for looking.	Supervise all adults to facilitate tone for reaching.	Provide strategies to incorporate necessary input during play.
Compensatory	Fabricate a splint to enable grasp.	Supervise feeding program which minimizes time required to eat so student can socialize with peers.	Cut seatwork pages in half so child can be successful in completing task.
Prevention intervention	Facilitate upright postures during infancy to prevent delays in standing and walking.	Supervise parent in use of oral facilitation techniques when feeding the baby, to prevent difficulties in lip closure during eating and talking.	Teach parent a range of motion program to prevent deformities.

framework for decisions concerning the use of remedial or compensatory approaches. Team members (or an individual therapist) ask four basic questions, and formulate an intervention plan that is based upon the configuration of the answers. Intervention focuses of prevention-intervention, remediation, and compensation may be used with all direct, monitoring, and consultation models of service provision. Table 6-3 provides examples of the interaction between these approaches to intervention and models of service provision.

Resource allocation is also a factor in this decision, but falls along a separate continuum. Both remedial and compensatory approaches may be inexpensive or costly in terms of use of resources, such as professional time and effort or finances. A compensatory focus, which requires the purchase of expensive equipment and takes extensive professional time to set up, is costly initially, but may be less expensive in the long run if the equipment allows greater independence, or prevents development of secondary physical problems such as contractures or orthopedic deformities. A remedial approach that facilitates independent reaching and hand-to-mouth patterns decreases the need for one-on-one attention during mealtime and conserves professional resources. Creative ways to identify and allocate resources are required to ensure that each child's needs are addressed effectively.

Providing Occupational Therapy Services

The ways in which services are best provided for infants and toddlers, preschoolers, and school-age students with disabilities have been debated over the past ten years, the time period during which provision of pediatric therapy services has shifted from clinical to public school and early intervention settings (e.g., Campbell, 1987a; Campbell, 1987b; Dunn, 1989a; Dunn, 1989b; Lyon & Lyon, 1980; Sternat, Messina, Nietupski, Lyon, & Brown, 1977). Team-

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based service provision has been of greater interest than have the mechanisms of providing services by individual professionals or team members. Various types of team structures have been debated and defined in terms of their major features. Of primary concern has been the extent to which therapy services are provided in isolation from the comprehensive program of education and related services being provided for a child, or in physical isolation from a child's natural life environment (Campbell, 1987a; Dunn, 1990).

Isolated Versus Integrated Service Provision

Isolated therapy services have been characterized as an approach where a therapist identifies specific child needs and designs an individualized intervention plan to address those needs. Intervention is implemented by removing the child from the natural life environment to a separate environment, such as a therapy room, and providing individualized one-on-one or small group services. Three underlying assumptions of an isolated service provision model are that: a) skills observed in an isolated therapy environment will occur in the child's other life settings; b) intermittent intervention (e.g., once or twice a week) will have a significant effect on skill acquisition and performance; and c) children with disabilities acquire developmental skills in the same sequence, and in the same patterns, as children without handicaps (Sternat, et al., 1977).

Many factors have prolonged the use of isolated therapy models. First of all, programs for children with special needs too often are located in isolated buildings or agencies that are separate from programs for typical children. Second, programming provided in isolated and segregated settings often is based on a remedially focused approach, where services are designed to facilitate acquisition of developmental milestone skills, even when these skills are not functional for the individual child or applicable to life independence as a child grows older. In this model the extent to which an individual child will have access to normal life environments is determined by professionals by examining developmental milestone acquisition (Baumgart, Brown, Pumpian, Nisbet, Ford, Sweet, Messina, & Schroeder, 1982).

More recent approaches to programming for children with disabilities demonstrate that assumptions concerning isolated and remedially-based programming are unfounded. Rather, as therapists approach the final decade of the 20th century, a more proactive position regarding isolated therapy approaches is necessary. Isolated approaches to intervention, such as use of a direct service provision model in a separated setting, may be necessary to address the needs of a limited number of children. Use of this service model requires justification by explaining why the isolated setting is necessary for the therapeutic outcome. This proactive position enables children to profit from the expertise of occupational therapy throughout their living, learning, and working day (i.e., the therapist functions within these settings), thus increasing the potential impact of occupational therapy on children's lives.

Taylor (1988) suggests that effective intervention decisions will be based on the demands of the individual's life settings. He reminds us of the constant and ongoing evolution of ideas in the human service professions:

> "... concepts and principles can help us get from one place to another, to move closer to a vision of society based on enduring human values like freedom, community, equality, dignity, and autonomy. Yet they must be viewed in historical context. The concepts that guide us today can mislead us tomorrow ... [When one concept] is achieved we must be prepared to find new ideas and principles to guide us through the challenges and dilemmas we will undoubtedly face ... (p. 51).

The American Occupational Therapy Association has defined models of service provision for the school-based therapy and early intervention (AOTA, 1987, 1989; Dunn et al., 1989). A continuum model of service provision is outlined which allows therapists to design a comprehensive set of services for all children in various types of settings. The continuum includes direct service, monitoring, and consultation service provision models.

Direct Therapy

Direct therapy refers to those intervention activities that are individually designed, and are carried out by the therapist and one child, or the therapist and a small group of children. The focus of direct therapy is to meet children's individualized needs through very specialized therapeutic strategies. A key factor in choosing direct therapy as the intervention model of choice, is to identify procedures that cannot be safely carried out by other personnel within the child's natural environment. Neurobiologically-based treatment paradigms most commonly fall into this category. For example, many sensory integration and neurodevelopmental treatment strategies can only safely be carried out under the on-site supervision of a therapist. Those theoretical frameworks require constant and ongoing monitoring of the autonomic nervous system mechanisms, the sensory processing mechanisms, and the postural and motor output systems. A therapist with an extensive background in the neurobiological systems is able to monitor changes that occur within these systems, and alter the treatment intervention very quickly to accommodate for changes that occur.

Direct therapy may occur within natural environments; it is still considered an isolated form of intervention if strategies are not incorporated into routines. For example, many of the postural weight shifts that occur as part of the normal sequences of neurodevelopmental treatment, may be easily incorporated into a young child's classroom routine. The proactive position for the future is that direct therapy integrated into a child's natural environment is more appropriate than isolated service provision. Isolated direct therapy is chosen only when the therapeutic task interferes with a child's natural life environment. For example, a therapist would interfere with a junior high student's socialization if s/he provided a neurodevelopmental treatment activity during the physical education class. In this case, if neurodevelopmental treatment was essential, providing consultation regarding age-appropriate adaptations in PE class, and conducting NDT activities in a more private envi-

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ronment, would be more responsive to the student's age-appropriate needs. Therapists must consider creative ways to incorporate the theoretical frameworks of occupational therapy into daily life tasks as much as possible, even when a direct intervention approach is appropriate. Incorporating the expertise of the occupational therapist into daily routines increases the opportunities for a child to practice the task and therefore acquire the functional skill.

Monitoring

Monitoring is the second service provision category. The importance of occupational therapy expertise for the natural life environments of the individual is addressed through monitoring. The importance of consistency in the implementation of strategies across all environments is also recognized through monitoring. Use of monitoring for service provision requires that the therapist conduct an assessment to identify the strengths and needs of the individual child. The therapist designs an intervention plan to meet individual needs and remains responsible for the outcome of the plan. Another person within the child's natural environment is trained by the therapist to carry out the plan, so that procedures will be implemented on a consistent basis and therefore have greater chance for generalization. The therapist remains in regular contact with the person who carries out the monitored program, so that necessary alterations in the program can be implemented in a timely manner. Three criteria are met in order to successfully choose a monitoring service provision model (AOTA, 1987, 1989). First, the health and safety of the child must be protected when the plan and procedures are carried out by the trained individual. Second, the implementor must be able to demonstrate the procedures without error and without cues from the therapist. Third, the implementor must be able to name the precautions, or the signs of risk or failure within the procedure, without cues from the therapist. Clearly the second and third criteria are measures to meet the first criterion of protecting the health and safety of the child. A monitoring program should not be given to an individual for regular implementation, if the therapist cannot ensure that these criteria are met. Failure to meet these criteria would put the child at risk and therefore put the therapist in a position of defending a program that is not being carried out in the designed manner. Ongoing contact between the therapist and the implementor is essential to ensure that high quality program implementation is assured and that adaptations are made in a timely manner.

Monitoring is a viable service provision alternative in many situations. Parents incorporate monitored programs within daily life routines such as bathing, diaper-changing, eating, and dressing. Teachers and teacher-aides provide monitored programs within the daily school routine in areas such as positioning and handling, eating, functional mobility and functional communication. Supervisors in a work environment provide monitored programs which adapt tasks to facilitate the worker's timely task completion. Monitored

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programs provide a means for occupational therapists to address the best fit between the individual's skills and needs, and demands of the environment, by providing more opportunities for generalization and practice than would be possible through a direct service model.

Consultation

Consultation is the third form of service provision and one which differs from direct therapy and monitoring in one significant way: the therapist is using his or her expertise to enable another person to address issues and outcomes identified by that person. The therapist is not directly responsible for the outcomes of the individual in the consultation model. Rather, the consultee is responsible for the outcomes with the individual child, but the therapist is responsible for the collaborative efforts with the adult who is carrying out the program. Three types of consultation are important in pediatric therapy: a) case consultation, an approach that focuses on the needs of individuals; b) colleague consultation where the needs of peers within a service environment are targeted; and c) system consultation which focuses on improvements of the system within which services are provided. In case consultation, the therapist and teacher might meet to discuss the ways in which the teacher might facilitate greater participation of a particular student in the reading group. A therapist collaborates with the teacher to design methods for the teacher to effectively calm the children down after recess in colleague consultation. Participation in a system-wide curriculum committee, or serving as a speaker in a pre-school Parents' Information Night, are examples of system consultation, where the objective is to improve how the system works so that all children will benefit.

A collaborative style of consultation acknowledges the specialized expertise of both the consultant and the consultee (Idol, Paolucci—Whitcomb & Nevin, 1987). For example, in a school situation, the occupational therapist and the classroom teacher each contribute specialized expertise from their own professions to work together to solve specific problems. When professionals collaborate, they share responsibility for identifying the problem, creating possible solutions, trying the solutions, and then altering them as necessary for greater effectiveness. The unique skills of the occupational therapist lend themselves very nicely to a collaborative style of consultation. Occupational therapists have backgrounds in behavior across the life span of individuals and understand the context of performance. These skills are easily translated into collaborative consultation. Dunn (in press) found that a collaborative consultation approach with preschoolers yielded an equivalent number of achieved IEP goals (approximately 70%). However, teachers who participated in a collaborative consultation reported that the therapists contributed to goal attainment in 24% more instances than teachers whose children received isolated direct services. Other professionals have different focuses that contribute to the collaborative relationship in different ways. Classroom teachers, for example, focus on the products of learning such as written work, verbal responses,

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staying on task to complete assignments, and attaining outcome competencies in subject areas.

Selecting the Service Provision Model

The range of service provision choices available to occupational therapists are outlined on Figure 6-5. The chart matches the severity rating from the Functional Skills Assessment Grid (Figure 6-3) with a range of intervention models that include direct treatment, monitoring, and consultation. Definitions and examples for each of the intervention models are provided in Table 6-4. Consultation involves use of several strategies, including adaptations to the child's environment, and teaching adults, such as teachers or family members, to implement intervention methods within daily life routines. Therapists monitor implementation of strategies that require ongoing supervision as they are carried out by others. Direct service is provided when therapists administer intervention strategies themselves. Many of the problems demonstrated by children are addressed ideally through use of several service provision models. More than one type of service provision is preferable, because the chances for generalization of learning to many environments are increased.

Selecting the Location for Services

The location where services are provided is determined by a therapist on the basis of individual child needs. Services may be provided, in the community at a job training site, in classrooms, or in homes. Consultation and monitoring are more likely to be provided in homes, classrooms, or other similar locations, because the purpose of these service provision models is to improve a child's ability to function in natural environments. Direct services are designed also to improve functional skills and may be provided in natural environments such as homes and community work sites. More often direct services are provided separately from the natural environments of the child, due to the types of intervention techniques that are being used. The natural environments where the outcomes desired for a child are actually going to be used, are the preferred locations for services. For this reason, provision of direct services is always paired with consultation or monitoring to ensure use of newly learned skills in natural environments.

Integrating Occupational Therapy With Other Disciplines

Direct, monitoring, and consultation models of service provision are implemented within a team structure. The primary team structure used within schools and early intervention programs is one of integrated services (e.g., Campbell, 1987a; Campbell, 1987b; Dunn, 1989; Dunn, 1990 Rainforth & York, 1986; Giangreco, 1986a, Giangreco, 1986b). Integration is a term that is used widely to describe service systems for individuals with disabilities. Figure 6-6 diagrams a model of comprehensive integration that differentiates among three distinct types of integration (Dunn, 1990). Many children with

SEVERITY OF PROBLEMS

Through interview and observation, the therapist will create a hypothesis about how the problem is interfering with program outcomes and will determine an assessment plan to confirm this hypothesis.

In collaboration with the team, the therapist will determine which level of interference is created by the problem(s). If documented evidence is available that the individual's behavior is currently interfering with his/her ability to benefit from intervention, the team reconvenes to reestablish priorities and create a new plan.

Rating	Parameter definition	No interv.*	Make recommendations*	Consultation			Monitor	Direct Service
				Adapt task matls environ.*	Adapt posture mvmt.*	Tch adult*	Spvs adult*	Use therapist admin. strategies*
NA	No problems are identified in therapy evaluation.	X						
0	Although a problem has been identified through evaluation, it is not presently interfering with the program outcomes. Needs may be met by self, parents, or professionals in other programs or agencies.		X					
1	The problem *influences* successful program outcomes; simple instructional or environmental changes are likely to result in functional performance.			X	X	X	X	
2	The problem *interferes* with specific program outcomes; specific strategies are necessary to enable functional performance.			X	X	X	X	**
3	The problem *prevents* successful program outcomes; multi-faceted strategies are necessary to reach functional performance.			X	X	X	X	**

* See Table 6-4 for definitions and examples.

** This level of service is

1. Only provided in conjunction with other levels of service (e.g., adaptation, supervision).
2. Only chosen if ONLY the therapist can provide the intervention safely.
3. Provided as part of the life environment unless the intervention interferes with age appropriate tasks.

Figure 6-5.

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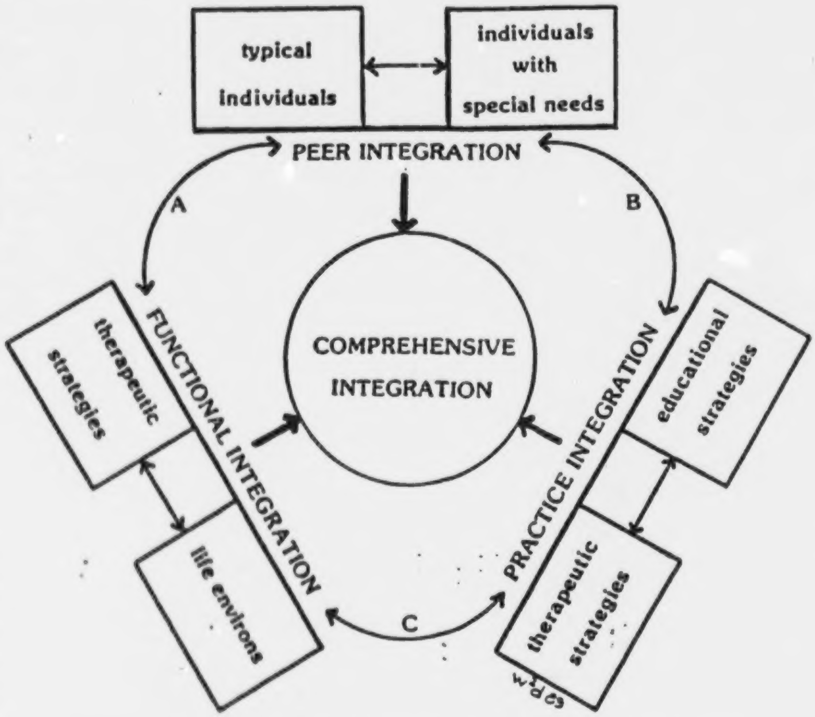
TABLE 6-4. Definitions and Examples of Severity of Problems Categories

	Interventions	Definitions	Examples
	No intervention	There is not a need for therapy intervention	
	Make Recommendations	The problem(s) which has been identified by the therapist is/are not related to targeted life task performance. The therapist makes appropriate recommendations to parents or other professional to enable them to take care of the problem.	Provide parent with information regarding community resources for recreational opportunities.
Consultation	Adapt task materials or environment	The therapist alters materials and objects in the environment to accommodate the individual's needs.	The therapist gets the handouts made with larger print for the individual.
	Adapt posture/movement	The therapist designs alternate strategies to facilitate good position and movement patterns.	The therapist constructs a well fitting seat for the individual.
	Teach Adult	The therapist shows another individual how to handle a situation. Ongoing contact may not be necessary.	The therapist shows the teacher how to position a child on the sidelyer.
Monitor	Supervise Adult	The therapist monitors a program designed by the therapist but carried out by another individual. There is ongoing contact.	The therapist supervises the child's feeding program.
Direct Service	Use Therapist Administered Strategies	The therapist provides direct service.	The therapist provides intervention using neurodevelopmental & sensory integrative techniques.


typical individuals
individuals with special needs
PEER INTEGRATION
A
B
COMPREHENSIVE INTEGRATION
therapeutic strategies
FUNCTIONAL INTEGRATION
life environs
educational strategies
PRACTICE INTEGRATION
therapeutic strategies
C

MODEL OF THE COMPONENTS OF COMPREHENSIVE INTEGRATION

Dunn, W. (1990). Integrated related services. In L. Meyer, C. A. Peck, & L. Brown (Eds.), *Critical issues in the lives of people with severe disabilities*. Baltimore: Paul H. Brookes. Reprinted with permission.

Figure 6-6.

disabilities attend school and community programs that include children who are not disabled. Infants and preschoolers may attend day care programs or be enrolled in community preschool programs. Older children may participate in community sports activities. Young adults may work in community-based competitive jobs while living in supervised apartments. These situations, characterized by their inclusion of individuals without disabilities, are described as *peer integration*.

The term integration also describes the use of therapeutic expertise to address children's needs within natural life environments. Therapists adapt tasks, materials, environments, or the posture and movement patterns of an individual, to achieve *functional integration*. Therapeutic objectives and strategies that enable children to achieve outcomes that are identified by all team members are examples of functional integration. In contrast, functional integration has not been achieved when therapy objectives are separate and isolated from the overall purpose of a child's program of early intervention or special education and related services.

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A third use of the term integration relates to the combined use of intervention strategies that typically are associated with education and therapeutic practices. A therapist, teacher, and speech pathologist who design a switch activation task for a child, where switch closure results in different responses to teacher requests, have collaborated in *practice integration*. In this instance, the intervention strategies selected combine the expertise of more than one team member, rather than reflect the perspective of one discipline in isolation.

Optimal services for children with disabilities include all three components of comprehensive integration: a) peer integration; b) functional integration; and c) practice integration. However, any one or two types of integration can be present in a particular situation. The arrows marked "A," "B," & "C" on Figure 6–6 indicates the combinations of two types of integration. Arrow "A" represents peer and functional integration, or situations in which the child participates with typical peers and the therapist creates adaptations within that environment. Arrow "B" represents the combination of peer and practice integration, or the therapist and teacher collaborating to create a plan for a regular education classroom. Arrow "C" represents the combination of functional and practice integration; this occurs when therapists work within self contained special education classrooms.

The types and amounts of integration that occur for children with whom a therapist interacts, are a critical factor in determining where therapy services will be provided. Underlying an integrated therapy approach to service provision are assumptions that therapeutic assessment and intervention are most useful when undertaken within natural life environments. Further, the greatest number of opportunities for generalization of functional skills occur when services are provided in natural life environments. Occupational therapists identify those performance components that are interfering with natural life outcomes by focusing on the performance outcomes of learning, work, play/leisure, communication, socialization, and activities of daily living.

Planning Intervention

Planned interventions are more likely to lead to attainment of the desired outcomes established for children, than are interventions that are provided without accommodation for individual children's strengths and needs. Thoughtful interventions result from a planning process used by therapists to determine parameters of service provision. A format designed to guide the process of planning for occupational therapy intervention is outlined on Figure 6-7. Therapists account for all aspects of planning by completing information on the form in collaboration with other team members or, in some instances, without input from other team members. The written form, in turn, documents the decisions made during the planning process.

All occupational therapy interventions provided for children are designed to enhance attainment of desired outcomes stated on a formal planning document, such as the IEP or IFSP. Therapists establish separate objectives for occupational therapy services, including those implemented through direct

INTERVENTION PLAN

Child's name: ________________ Date: ________________

Birthdate: ________________

Agency name: ________________ Chron. Age: ____ yrs. ____ mo.

Outcome Statement: ________________

Outcome Category:

____ Learning

____ Play/Leisure

____ Socialization

____ Work

____ Communication

____ ADL

Performance Components:

ENABLING COMPONENTS: ________________

CONCERNS: ________________

Service Provision Models:

____ Direct*

____ Monitoring

  ____ supervise adult

____ Consultation

  ____ teach adult

  ____ adapt posture/mvmt

  ____ adapt task/matls

  ____ adapt environ

*provided in conjunction with one or more other service models

____ **DIRECT** ____ n.a.

Target Objective: ________________

Intervention Approach: ____ remed. ____ compens. ____ prevent-interv.

Describe: ________________

Location of Services: ________________

Intervention Procedures: ________________

Method for Documentation of Performance:

behavior to be observed: ________________

natural environment for observation: ________________

measurement/data to be collected: ________________

criterion for successful performance: ________________

____ **MONITORING** ____ n.a.

Target Objective: ________________

Intervention Approach: ____ remed. ____ compens. ____ prevent-interv.

Describe: ________________

Location of Services: ________________

Intervention Procedures: ________________

Figure 6-7.

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Implementor: ______ teacher ______ family ______ aide ______ other: ______________

Training and Verification Strategies: ______________________________________

____

Proposed Meeting Schedule: ______ weekly ______ bimonthly ______ monthly

Location of meeting: ____

Method for Documentation of Performance:

behavior to be observed: ____

natural environment for observation: ______________________________

measurement/data to be collected: _________________________________

criterion for successful performance: ______________________________

______ **CONSULTATION** ______ n.a.

Area of Concern: ____

Identified by: ___________________________________ role: __________

Statement of Area to be Addressed: _________________________________

____

Location of Services: ____

Strategies: ____

____

Proposed Meeting Schedule: ______ weekly ______ bimonthly ______ monthly

Location of meeting: ____

Method for Documentation of Performance:

behavior to be observed: ____

natural environment for observation: ______________________________

measurement/data to be collected: _________________________________

criterion for successful performance: ______________________________

Figure 6-7. *Continued.*

service, monitoring, or consultation. This target objective defines the specific purpose and emphasis of therapy service provision by defining an objective that is related directly to achievement of the overall outcome. A therapist designed a consultation intervention program to facilitate a child's ability to play independently, an outcome that was identified by the child's parent and by team members as a whole. The occupational therapy target objective required the child to use reach and touch skills to manipulate large toys that had been modified to facilitate the child's ability to interact with objects independently. Team members established an outcome for a seven-year-old student to communicate with others in his school environment. The occupational therapist provided direct therapy twice weekly within the child's classroom, with the objective of improving the efficiency of reach and pointing skills for access, and use of a direct selection communication device. In addition, the therapist also developed a monitoring program where the speech pathologist and teacher used specific facilitation and inhibition procedures whenever the child communicated, using the device with the objective of improving efficiency of reach and pointing skills.

Intervention planning provides a means for description and documentation of: a) performance components, including those that enable performance and those that are of concern; b) service provision models that will be used; and c) specific intervention procedures within each of the service provision models selected for use.

Enabling Components and Concerns

The positive and negative impacts of sensorimotor performance components on the stated outcome are transferred from the Functional Skills Assessment Grid (see Figure 6-3) and become the basis for intervention that will use a child's enabling performance components to address areas of concern. Enabling components are those performance components that have been rated on the Functional Skills Assessment Grid as "NA," no problems are identified in therapy assessment. Scores of "1," "2," and "3" indicate performance components that are influencing, interfering, or preventing performance of a specific component, and are listed as areas of concern that will be addressed through intervention. The ways in which both enabling components and concerns are accommodated within a specific intervention program derives directly from the overall intervention approach selected for use. Enabling performance components become a means to bypass areas of concern when a compensatory approach is selected. These same enabling components provide a vehicle by which concerns are addressed directly when remedially focused intervention is provided. For example, a therapist identified all performance components under the outcome area of socialization as "NA," with the exception of attending skills which was rated as "3." The therapist used the child's existing performance components as a means to enable and develop attending skills during social activities.

Service Provision Models and Intervention Strategies

The plan for the model of service provision is stated for each outcome that will be addressed through occupational therapy services. The format allows a therapist to indicate both the service provision model and the strategies that are planned for use.

The specific or target objective addressed by each model of service provision selected for use is indicated on the Intervention Plan. Descriptions of the service provision approach, and the location where services will be provided, are also stated. A brief description of the intervention procedures to be used, and statements of the methods for documenting performance complete the plan.

Altering the Intervention Plan

Many of the parameters that are included on the Intervention Plan are also contained in legal planning documents such as the IEP or IFSP. Both of these documents require statements of the services that will be provided, their frequency, and duration. Legal requirements in particular states establish other parameters of the service provision process that also must be included on official planning documents. Any changes made in the Intervention Plan that

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are also included on legal documents, may only be made under the conditions established for changing IEPs, IFSPs, or other types of plans. Federal and most state legal requirements concerning plans of these types require formal review mechanisms, including conferences with parents and school administrators, before changes may be made in the types of early intervention or related services being provided, the frequency at which those services occur, and their duration. Families of children with disabilities are key members of programming teams. Changes in the service provision model(s) being used, frequency of contact between the therapist and child, duration of service, or termination from services, are first discussed with the child's family. No changes are made in occupational therapy Intervention Plans, or more formal documents, without first providing families with an explanation and rationale for proposed changes, so that parents have the opportunity to contribute to these decisions and they can be shared with professional team members.

Some parameters of intervention planning may be changed by therapists, and documented in progress notes or other records that are kept as an ongoing record of services being provided. The intervention procedures that a therapist plans to use to enable a child to achieve a target objective may be changed on the basis of objective clinical judgement or documentation data. A therapist, for example, planned to use jaw control procedures to facilitate coordinated mouth opening and closing during eating, with a child with low tone in the oral musculature and difficulty closing the mouth. Clinical observation indicated that the child did not tolerate jaw control and attempted consistently to remove the therapist's hand. Intervention procedures were changed so that a program of touch pressure stimulation was provided before eating, in order to allow the child to accommodate eventually to the touch pressure stimuli provided through jaw control.

Use of the Intervention Plan

Occupational therapy Intervention Plans are outlined in Figures 6-8 and 6-9 to illustrate the outcome of the intervention planning process for two children. Figure 6-8 outlines the plan developed for Jared, an eight-year-old child with slightly diminished muscle tone, poor balance and postural control, and fine motor difficulties, who was originally labeled as developmentally delayed at the age of three years. Jared is enrolled in a regular education second grade class. His teacher referred him to the school district's diagnostic team due to concerns about his difficulties in completing legible seatwork. The team decided that Jared's areas of concern were best addressed by itinerant special education and occupational therapy services. The occupational therapist planned services that utilized monitoring of the special educator and physical educator and consultation with the classroom teacher.

Figure 6-9 illustrates the plan developed for Rebecca, a 14-month-old with Down syndrome, whose mother identified an outcome of desiring Rebecca to eat independently. The infant educator requested assistance from the program's occupational therapist who, in turn, determined that direct services

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INTERVENTION PLAN

Child's name: Jared

Agency name: Washington School

Date: Jan. 25, 1989

Birthdate: Sept. 14, 1980

Chron. Age: 8 yrs. 4 mo.

Outcome Statement: Jared will complete his seatwork legibly

Outcome Category:
xx Learning
_____ Play Leisure
_____ Socialization
_____ Work
_____ Communication
_____ ADL

Performance Components:

ENABLING COMPONENTS:
perceptual skills
cognitive abilities
attending skills

CONCERNS:
manipulation/hand use
mgmt. of body position

Service Provision Models:
_____ Direct*
xx Monitoring
xx supervise adult
xx Consultation
xx teach adult
xx adapt posture/mvmt
xx adapt task/matls
_____ adapt environ

*provided in conjunction with one or more other service models

_____ **DIRECT** xx n.a.

Target Objective:

Intervention Approach: _____ remed. _____ compens. _____ prevent-interv.

Describe:

Location of Services:

Intervention Procedures:

Method for Documentation of Performance:
Behavior to be observed:
Natural environment for observation:
Measurement/data to be collected:
Criterion for successful performance:

xx **MONITORING** _____ n.a.

Target Objective: (a) Jared will remain in his chair throughout the seatwork period. (b) Jared will complete a workbook page legibly

Intervention Approach: xx remed. _____ compens. _____ prevent-interv.

Describe: (a) experiences to increase balance and postural control; (b) activities to improve hand use

Location of Services: (a) gym (b) special education classroom

Intervention Procedures: (a) movement exploration; experimentation with body movement.

Figure 6-8.

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(b) manipulation tasks

Implementor: xx teacher ____ family ____ aide ____ other: ____

(a) physical educator; (b) special educator

Training and Verification Strategies: teachers will demonstrate techniques to therapist; therapist and teacher will record data on same activities and compare results

Proposed Meeting Schedule: ____ weekly xx bimonthly ____ monthly

Location of meeting: (a) gym (b) special education classroom

Method for Documentation of Performance: (postural control; hand use)*

*Note: Measurement addresses classroom performance because this is the desired outcome from the interventions that will be provided in special education & PE).

Behavior to be observed: sitting at desk and working during seatwork period

Natural environment for observation: regular classroom

Measurement/data to be collected: time spent without hanging on chair back or lying on desktop; amt. of work

Criterion for successful performance: remains in chair 30 min. and completes at least two pages of work

Behavior to be observed: work completed during seatwork period

Natural environment for observation: regular classroom

Measurement/data to be collected: completed seatwork pages

Criterion for successful performance: 90% legibility according to criteria collaboratively set by therapist and teachers

xx **CONSULTATION** ____ n.a.

Area of Concern: Learning

Identified by: Abigale Jennings role: classrm. tchr.

Statement of Area to be Addressed: Jared's ability to complete seatwork in a legible manner

Location of Services: regular classroom

Strategies: adapt pencil, adapt chair, find alternate body positions, allow taping of harder work, provide more space to write

Proposed Meeting Schedule: ____ weekly xx bimonthly ____ monthly

Location of meeting: Washington School Conference Room

Method for Documentation of Performance:

Behavior to be observed: completion of legible seatwork

Natural environment for observation: regular classroom

Measurement/data to be collected: seatwork pages that have been completed within a thirty minute seatwork period

Criterion for successful performance: completion of two pages of seatwork with 90% legibility in a 30 minute seatwork period. (legibility criterion set by teacher and therapist)

Figure 6-8. *Continued.*

INTERVENTION PLAN

Child's name: Rebecca
Date: March 24, 1989
Birthdate: Jan. 11, 1988
Agency name: Midstate Regional Ctr.
Chron. Age: 1 yrs. 2 mo.
Outcome Statement: Rebecca will eat independently

Outcome Category:
xx Learning
____ Play/Leisure
____ Socialization
____ Work
____ Communication
xx ADL

Performance Components:

ENABLING COMPONENTS:
mgmt. of body position
mvmts. for eating
perceptual skills
likes textures of foods

CONCERNS:
utensil use
oral motor movements

Service Provision Models:
xx Direct*
____ Monitoring
____ supervise adult
xx Consultation
xx teach adult
____ adapt posture/mvmt
____ adapt task/matls
____ adapt environ

* provided in conjunction with one or more other service models

xx DIRECT ____ n.a.

Target Objective: Rebecca will eat a meal independently
Intervention Approach: xx remed. ____ compens. ____ prevent-interv.
Describe: provide developmentally appropriate tasks, provide support for development of eating skills, use enabling skills
Location of Services: the Velcoper home
Intervention Procedures: provide oral motor facilitation; provide verbal and physical cues for utensil use; incorporate object manipulation and oral motor skills into other play activities

Method for Documentation of Performance:
behavior to be observed: eating during snack or mealtime
natural environment for observation: Rebecca's home
measurement/data to be collected: amount of liquid drunk from straw; number of spoonsful eaten
criterion for successful performance: (a) drinking 4 ounces of liquid through a straw and (b) eating 6 spoonsful of food by bringing the spoonful to her mouth and scraping the food from the spoon with her lips.

____ MONITORING xx n.a.

Target Objective: ____
Intervention Approach: ____ remed. ____ compens. ____ prevent-interv.
Describe: ____
Location of Services: ____
Intervention Procedures: ____
Implementor: ____ teacher ____ family ____ aide ____ other: ____

Figure 6-9.

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Training and Verification Strategies: ______

Proposed Meeting Schedule: ______ weekly ______ bimonthly ______ monthly

Location of meeting: ______

Method for Documentation of Performance:

behavior to be observed: ______

natural environment for observation: ______

measurement/data to be collected: ______

criterion for successful performance: ______

__xx__ CONSULTATION ______ n.a.

Area of Concern: **Activities of Daily Living: Eating**

Identified by: **Pat Velcoper** role: **parent**

Statement of Area to be Addressed: **Rebecca's ability to eat by herself**

Location of Services: **the Velcoper home**

Strategies: **teach mom about oral motor control, techniques for mouth and lip closure; provide techniques to improve utensil use**

Proposed Meeting Schedule: __xx__ weekly ______ bimonthly ______ monthly

Location of meeting: **the Velcoper home**

Method for Documentation of Performance:

behavior to be observed: **eating during meal or snack time**

natural environment for observation: **Rebecca's home**

measurement/data to be collected: **amount of liquid drunk from straw; number of spoonsful eaten**

criterion for successful performance: **(a) drinking 4 ounces of liquid through a straw and (b) eating 6 spoonsful of food by bringing the spoonful to her mouth and scraping the food from the spoon with her lips.**

Figure 6-9. *Continued.*

and consultation with the mother were needed to assist Rebecca in achieving the desired outcome. She arranged to accompany the infant educator once weekly on a visit to Rebecca's home during lunchtime. The therapist provided direct intervention during this time period and also reviewed Rebecca's performance and the strategies used at home with the mother.

Addressing Management Issues

Determination of Caseload

An important aspect of the service provision process is the determination of an appropriate caseload. Too many children on a caseload interferes with effective service provision, because sufficient time is not available to give proper attention to individual needs. Therapists establish caseloads that acknowledge the variety of tasks that are required within the service provision process, and provide a mechanism for interacting with significant individuals such as family members, other team members, referral sources and administrators.

There are three task categories in the determination of caseload. The first category is comprised of the non-service provision tasks. This includes activities such as travel, lunch, and supervisory responsibilities. The time needed in this

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category is calculated by adding the actual time spent in each of these tasks. The second category is comprised of associated service provision tasks, such as team meetings and assessments. These tasks contribute to the service provision process by providing time for interaction and data gathering. An exact amount of time for these tasks is difficult to determine, due to variance from week to week or by time of year (e.g., more assessments at the beginning or end of the school year for school based therapists). An average amount of time spent per week is estimated. The time spent in these two categories is added and the total subtracted from the total time available in the work week. (see Figure 6-10 for an example).

Total time available per week:	**40 hours**
−total of categories one and two:	**x hours**
Time available for service provision:	**hours**

The third category is comprised of actual service provision tasks. Service provision includes both the time spent with the individual, and the time needed to prepare for the intervention and document those interactions properly. Documentation provides a written record of the actions taken and decisions made on behalf of the individual. Chapter Eight provides an informative discussion about effective documentation strategies. An 80/20 ratio between time spent providing services, and time spent in related preparation and documentation has been suggested (AOTA, 1987). Use of this ratio means that for every four minutes of service provision, an additional one minute is set aside for preparation and documentation. For example,

•.... for 30 minutes of service provision, an additional 7.5 minutes are needed for preparation and documentation, for a total of 37.5 minutes. This translates to 0.625 of an hour (37.5 minutes/60 minutes = 00.625).

•.... for a 60 minute service provision session, an additional 15 minutes would be needed for preparation and documentation. This total of 75 minutes translates into 1.25 hours. (75 minutes/60 minutes = 1.25).

The therapist uses decimals such as these to determine the number of slots available for intervention:

$$\frac{\textbf{hours available for service provision}}{\textbf{decimal representing length of sessions}} = \textbf{no. of intervention slots available}$$

If the therapist sees children for thirty minute sessions, but sees children twice per week, then the total from the above calculation must be divided by 2 to arrive at the number of individuals that can be served. If the therapist sees children once a week for 60 minutes, then the total obtained from this division represents both the number of slots available, and the number of individuals who can receive intervention. When children are seen in groups, the total amount of time for the group is divided among the members to keep calculations consistent, and to accurately represent the amount of therapist time that is dedicated solely to each individual. All these options are combined to

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SAMPLE CALCULATIONS

Service Provision Time

Mary works full time for a community-based agency. She travels two hours per week between the early intervention program and the independent living center. She spends 30 minutes per day at lunch. She spends an average of three and a half hours per week in team meetings and assessment tasks, although some times during the year are more concentrated on these tasks than others.

total time available per week:		40 hours
total of Category One: travel = 2 hours lunch = 2.5 hours		−4.5 hours
	subtotal	35.5 hours
total of Category Two: team meetings assessments		−3.5 hours
Time Available for Service Provision		**32.0 hours**

Figure 6-10.

produce a more realistic schedule that is responsive to individual needs (e.g., some individually addressed in direct service, monitoring, or consultation; some seen in groups; some sessions 30 minutes per week, and some sessions 60 or 90 minutes per week). Figure 6-11 provides an example of service provision calculations.

A maximum caseload of 40 is recommended by AOTA (1987) for any school-based therapist. However, this figure is too high if travel, supervision,

SAMPLE SERVICE PROVISION CALCULATIONS FOR MARY
(See Figure 6-10)

Time available for service provision = 32 hours

for 30 minute sessions (0.625)	for 60 minute sessions (1.25)
32 hrs/0.625 = 51 sessions available per week*	32 hrs/1.25 = 25 sessions available per week

* if each child participates in two sessions per week, 25-persons can be scheduled.

SAMPLE CALCULATIONS FOR SERVICES WHICH ARE PROVIDED IN GROUPS

20 hours available for service provision

60 minute sessions (1.25)

If there are two individuals per group, each individual would have half of the time dedicated to her/him, or 0.625 hour per person (0.625 + 0.625 = 1.25)

Therefore, although 20 hours/1.25 = 16 sessions, if one considers the number of individuals who can be served, (20 hours/0.625 = 32) 32 persons receive services.

Figure 6-11.

or other duties are a regular part of the work week. Professionals must consider seriously whether children are actually receiving effective occupational therapy services when caseloads exceed recommended numbers.

Scheduling and Time Management

Efficient scheduling and management of time is one mechanism that allows therapists to adequately address the needs of all children on a caseload. Scheduling requires planning to increase efficiency. For example, therapists who schedule children in one special education classroom for services during a large time block, will more efficiently accommodate for scheduling problems, such as student absences, than will the therapist who schedules children for individual time slots (e.g., Campbell, 1987a & b). Scheduling all children receiving services, who are assigned to the same public school cluster group, is another way of scheduling to manage time more efficiently. Similarly, scheduling home visits for all children in the same area of the city on the same day, decreases the amount of time that may be required for travel. Therapists also consider creative plans for scheduling intervention with particular children. For example, a more intense direct service and monitoring schedule, over a shorter period of time, may enable a child to become successful more quickly in a regular education placement, than if that same child received those services spread out over the entire school year. Problems concerning scheduling and time management are challenging issues for occupational therapists. Creative solutions that are responsive to the organizational structure of the school or early intervention program, are possible when therapists consider all options for service provision and maximally utilize available resource personnel.

Use of Equipment and Materials to Enhance Intervention Outcomes

Therapists frequently use special types of equipment and materials to carry out intervention programs. The equipment and materials are chosen because of the properties necessary to achieve functional outcomes. Therapists who select equipment and materials, on the basis of the properties required to achieve intervention objectives, have many alternatives available to them from children's environments. For example, equipment that provides an unstable surface to facilitate postural weight shifts may include not only a therapy ball, but also a high density foam block (available through furniture upholsterers), the cage ball from physical education, or rocker boats and other elementary school gross motor and playground equipment. Not only is a wider range of equipment available when therapists use available resources, but also skills are more likely to generalize to functional life tasks. The objective of the intervention provided to develop postural shifting, is to enable the child to use this skill in functional situations, such as when using playground equipment. Skills are more likely to be established for functional use when natural, rather than contrived types of equipment are selected.

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Providing Comprehensive Services

Many agencies have different purposes when providing early intervention or special education and related services. The purpose of early intervention is to provide services designed to meet the developmental needs of children and the needs of families related to enhancing their children's development. Public education programs for children with disabilities are structured to provide education and those related services necessary for children to benefit from education. Hospitals and other community agencies have as their missions to provide services for special purposes, such as medically-related health, financial assistance, work preparation and training, or mental health programs. Pediatric occupational therapists may be employed in any number of settings by a wide variety of agencies. Occupational therapy services provided under that agency's administration and financing are aligned with the purpose of the agency. For example, services provided in public education settings enable children to benefit from educational opportunities. Addressing all of the concerns identified through assessment is appropriate only when all areas of concern negatively impact on the child's participation in education. Areas of concern that do not influence a child's educational performance are addressed by other community agencies or resources.

Each occupational therapist has professional goals and purposes. It is important for therapists to define these purposes clearly for themselves so that chosen professional activities enhance goal attainment. Employment choices play a major role in either enhancing, or blocking professional goal attainment, with the best outcomes occurring when the mission of the employing agency and one's professional goals are aligned. Agency purposes often require professionals to play a variety of roles and have a wide range of responsibilities. For example, a role that occupational therapists may be required to play in early intervention programs is that of a case manager or service coordinator for specifically assigned families. Similarly, many therapists employed in school settings may be responsible for coordination of children's therapy services with those being provided by other community agencies or medical facilities. Traditional roles of occupational therapists are expanding as current practices with infants and children change to better reflect current public policy and legislation.

JS1 100015$$45 06-19-90 10-04-57 [MV]

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Activity Guide Sheets

When occupational therapists work in the schools, they are faced with creating a wide range of activities within a variety of environments. Sometimes resources are limited, and the 'perfect' piece of equipment is not available to carry out an activity. Other times, it is most optimal to carry out intervention strategies within natural life environments (e.g., the classroom, P.E. class, recess).

The following pages are Activity Guide Sheets which were compiled as a resource for occupational therapists in the schools.

Some of the activities were adapted from:

Bissell, J., Fisher, J., Owens, C., and Poleyn, P. (1988). Sensory motor handbook: A guide for implementing and modifying activities in the classroom. Torrance, CA: Sensory Integration International.

Bush, W. and Giles, M. (1969). Aids to Psycholinguistic Teaching. Columbus, OH: Charles E. Merrill Publishing Company.

Klein, M.D. (1987). Pre-Scissor skills: Skill starters for motor development. Tucson, AZ: Therapy Skill Builders.

These also serve as useful additional resources

Strategies to Facilitate Eye-Hand Coordination

Eye-hand coordination is important for independent learning, work, play and self-care. Skilled hand use underlies the student's ability to use tools effectively and visual guidance of hand movements improves their accuracy. Many tools require the use of both hands together, in reciprocal or lead-support movements. Scissors, pencils, crayons, bats, hammers, screw drivers, silverware and toothbrushes are all tools that children learn to use. The following suggestions can facilitate eye-hand coordination leading to improved tool use.

1. Play games and sing songs which require the student to clap to the music, clap or tap in patterns, (e.g., "Peas Porridge Hot" and "The Wheels on the Bus").

2. Teach the student to keep time to music with rhythm sticks, a tambourine, triangle, or any instrument which requires use of both hands.

3. Require the students to fold their work papers to be handed in or taken home; have students fold napkins for snacktime.

4. Create art projects which require paper tearing, cutting, use of glue bottle, coloring, drawing and use of small items (e.g., macaroni, beads).

5. Create a learning station which contains manipulative items for students:
    a. pop beads of different shapes and sizes
    b. Duplos/Legos
    c. beads, macaroni, lifesavers and string
    d. sewing cards - if you do not have resources to purchase sewing cards, make some from cardboard, or greeting cards, punch holes around the edges and place lace with a long plastic tip (e.g., a shoe lace) on the card
    e. a paper punch - encourage the students to punch out holes to make a design
    f. clay or playdough - instruct the students to pinch, roll, squeeze, and make shapes
    g. a stapler - have students collate and staple papers together make designs with the staples, use a small stapler for small hands
    h. spring closure clothespins - teach the students how to play "Crown the King"; place the clothespins around edge of a coffee can which has a man's face glued to it . . . large tongue depressors glued to clothespins make it easier for children with weaker hands to open them
    i. tongs and tweezers - use them to pick up and place objects such as cotton balls, blocks, macaroni, etc.
    j. activities which require glue - use a squeeze type glue bottle
    k. Lite Brite game- set up particular patterns for the students
    l. potholder looms- cut up a variety of fabrics to provide various kinds of stretch (e.g., thick or thin knits, elastic)

m. nuts and bolts- let the students screw them together

6. Plan some cooking activities. Provide a variety of kitchen implements to use such as spoons, whisks, manual egg beater, rolling pin, tongs, etc.

7. Play games and act out stories using hand puppets.

8. Teach the students how to make "shadows on the wall" with their hands.

9. Provide sponges, squeeze bottles, and squirt toys for water play when appropriate.

10. Create a construction area which contains common tools such as a screwdriver, pliers, rubber hammer, saw, nuts and bolts. Teach students their proper use.

11. Provide painting opportunities on various sizes of paper.

12. Practice pre-writing patterns on large sheets of paper and the blackboard.

13. Write or draw on sidewalks, blacktop or pieces of screen; they all provide resistance during the movement.

14. Allow the student to wash the blackboard.

15. Develop strength in the hand to hold and manipulate tools:
    a. have the student swing using a rope (requires a tight grasp to hold onto the rope)
    b. play tug-o-war
    c. pull taffy
    d. create sculptures with playdough or clay
    e. tear paper or fabric
    f. use a paper punch or stapler
    g. construct and dissemble Duplos/Legos

16. Play balloon volleyball; use paddles, paper plates or hands to hit the balloon.

17. Use a flashlight; have the child follow the light spot as it moves around the room, and point to or touch the spot upon request.

18. Play "Cat & Mouse" on the chalkboard. Draw a dot, then another. Have the child draw a line from one to the other. This requires the child to follow your hand movement. Make movement in diagonal, horizontal, vertical, and circular patterns.

19. Teach the children finger games (e.g., Eensie Weensie Spider, Little Bunny Fu Fu, Twinkle, Twinkle Little Star, Head and Shoulders, Knees and Toes, I'm a Little Teapot, Where is Thumbkin? Little Ducks Out to Play).

20. Teach the students to snap their fingers.

21. Teach the class sign language or the manual alphabet.

22. Show the students how to pop soap bubbles in the air.

23. Create a town on a large piece of butcher paper. Give students match box cars and allow them to "drive around town."

Strategies to Facilitate Production of Written Work

Students who have difficulty completing written assignments legibly and in a timely manner may have poor fine motor control. The following suggestions offer alternative strategies so these students may feel successful while producing the work needed to allow the teacher to judge their competency.

1. Determine a realistic amount of materials needed to indicate the student's proficiency in the subject. Grades can be determined by the percent correct from completed items.

2. Determine a criterion for performance (e.g., five consecutive correct answers) and let the student stop when the criterion is met.

3. Allow the student to work at a manageable speed and determine the grade by computing the percent of items finished.

4. Use alternative methods of testing, such as, multiple choice, true/false, or matching instead of essays. When longer answers are needed, allow the student to respond orally, tape record the answers, or assign someone to write down what the student says.

5. Fine motor difficulties may become more pronounced as the day progresses. The following adaptations may be helpful if this is the case:
   a. demand more written work in the morning
   b. allow homework to be completed using an alternative method (i.e., tape recorder or computer)

6. Create a writing sample that is acceptable for a particular classroom. Place clear contact paper over the sample and give to the student as a guide for what writing should look like; allow the student to trace the words with a water color marker for practice.

7. Provide alternate methods of completing assignments to decrease handwriting requirements; these suggestions also enable the student to demonstrate knowledge in content areas with less interference from hand control. Allow the student to:
   a. use a computer or typewriter
   b. use a tape recorder
   c. dictate answers to another student or the teacher
   d. quiz the student orally

8. Make a master copy of a written assignment; have the student trace over letters/words being used in the assignment.

9. When appropriate, allow student to draw pictures to communicate acquired knowledge rather than relying only upon written language.

Occupational Therapy Education
The University of Kansas Medical Center
Kansas City, Kansas 1990

Strategies Which Facilitate Development of Scissors Skills

When a student is unable to use scissors accurately and efficiently, many classroom activities are poorly executed or not completed. Along with activities to increase the student's ability to use both hands together efficiently, strengthen hand muscles, and refine fine motor control (see guide sheets which offer suggestions in these areas), materials and methods for scissor activities can be modified for successful classroom participation. Specific cutting activities can also be helpful.

1. Determine the appropriate type of scissors for the student. Consider the factors of hand dominance, hand size, level of fine motor control, and level of independence. One can purchase electric scissors, easy grip (loop) scissors, safety scissors, double ring training scissors, adult scissors at school supply, hardware and fabric stores.

2. Choose the appropriate cutting material. Thicker paper (such as oaktag, index cards, construction paper) is often easier to cut for beginners. Regular paper or paper sacks are an intermediate paper weight. Onionskin and nonpaper (such as string, tape, playdough) are the most difficult materials to cut.

3. Select the appropriate size of paper. The paper should be cut into a size which is easily manageable for the child.
    a. Beginning cutters can use two-by-one-inch strips of paper to refine their open/shut hand movements. The paper strip can usually be cut in half, with only one or two attempts, giving the student a feeling of accomplishment.
    b. If the student has the cutting movement, but cannot manage both scissors and paper, hold the paper for the student, tape or clip it to a stable surface (i.e., desk or clipboard).

4. Work on coordination for scissors use:
    a. Punch holes in paper, have the student cut from one hole to another.
    b. Make shapes using stamps, have the student cut from one shape to another.
    c. Make cutting templates. Using two pieces of heavy cardboard and utility knife, cut a 1" line in both pieces. Tape the pieces together on three sides to form a pocket. Slide paper in the pocket and show the student how to cut the line following the slit in the template.
    d. Draw thick lines on a piece of paper. As skills improve, the line can be lengthened and made thinner.

5. Recognize the developmental cutting sequence: straight lines, angled lines (square, triangle), curved lines (circle), and then figures.

Strategies to Facilitate Organization of Classroom Materials

Students experiencing difficulty with classroom activities may have problems organizing their materials in preparation for a task. They may not be able to locate the appropriate materials needed for a project. They may have difficulty finding an object when it is mixed in with other things (figure ground), they may only recognize an object if it is oriented in a certain direction (spatial orientation), or they may recognize an object only when they see the entire object (visual closure). The following suggestions offer alternative methods to assist the child in organizing materials for use in the classroom. These strategies compensate for poor organization by providing an organizational structure.

1. Design a map of the student's desk space. Teach the student how to find and return each material to its appropriate space according to the map.

2. Color code materials by subject: color code all books, notebooks, file folders, etc., the same color for each subject.

3. Put all materials for each subject in a separate packet. Arrange these packets according to the student's schedule. (Note: this suggestion requires purchase of multiple pencils, pens and crayons).

4. Use alternative work spaces. Replace standard school desks which have storage compartments underneath with:
    a. cubbies on the wall
    b. a table with storage behind the table

5. Label storage areas according to student's schedule.

6. Use one large notebook (with tabs and file folders if possible) for all subjects. Color code tabs with subjects for ease in finding appropriate place in notebook.

7. Place all materials for one subject on one lunch tray. Hand the lunch tray containing the appropriate materials to the student at the start of the lesson.

8. Take control over the student's materials yourself. When a lesson is about to begin, use the target student's materials for your initial demonstrations, then hand the materials to the student one part at a time.

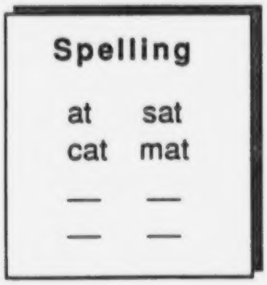
Strategies to Facilitate Completion of Seatwork Pages
Adaptation for Visual and Attentional Demands

A student may have difficulty completing seatwork pages for a variety of reasons, including poor attention to the task, poor fine motor or perceptual skills for placement of responses on the page, or poor ability in the learning area (e.g., math, reading). While a remedial program is frequently indicated to address their problems, there are a number of ways to adapt seatwork activities to increase the potential for successful task completion. This guide sheet addresses the perceptual and attentional features of seatwork. Please refer to the eye-hand coordination guidesheet when it seems this is the interfering variable.

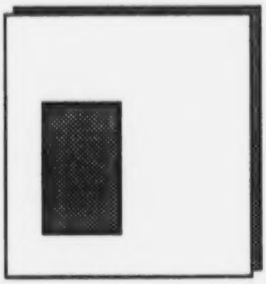
1. Place fewer items on each page, and space the items further apart. This strategy provides more space for writing answers, and decreases the amount of work required in one task. The student will feel positively about completing the task, which can provide motivation to complete other seatwork tasks.

2. Create a tagboard shield with a window cut in the center to reveal one item at a time. The student can move the window from item to item to complete the seatwork page.

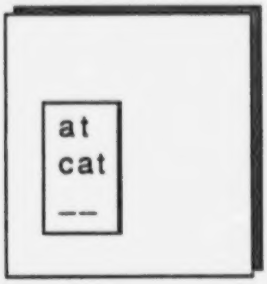
a) spelling paper
& pictures



b) cut tagboard



c) tagboard over



This strategy decreases the number of visual distractors available for each time, but may require additional stability in the non-preferred hand to hold the shield in place. Therefore, it is most useful for students with visual perception problems but not those with motor problems.

Completion of Seatwork Continued

3. Teach the student how to use a straight edge (e.g., ruler or cardboard marker) to keep the place on the page. Allow the student to use an index finger to keep place on the page.

4. Fold the seatwork paper in columns or rows, and number each of them in succession. As the student completes one section, the paper can be unfolded to reveal the next section.

5. Sometimes the use of a shield, or paper folding is not enough to enable the student to manage the task. In these cases, the paper can be cut apart into manageable sections, and then taped back together when the items are finished. When a student is very active or distractible, the task can include getting up to turn in each strip; this enables the student to move and shift attention to a new task for a short period of time before proceeding with the seatwork.

6. Outline each item with a heavy or dark line, or use a sequence of colors to mark items. This sometimes provides external cues to enable the student to focus on each item separately.

7. Number the lines on the paper to assist the student in keeping the place on the page.

8. Provide an example of a correctly completed seatwork page that is in the same format as the desired performance. Students can see how large the writing is and how spacing should look.

9. Allow student to check work themselves as soon as it is completed. This provides the student with immediate feedback, and helps with retention of correct knowledge.

10. Allow student to correct errors without penalty when practicing a new skill. This encourages cognitive skill development without penalizing the student for poor perceptual and attentional difficulties.

11. Create situations in which visual and touch cues can be used to support task completion (e.g., placing arm on the student's shoulders, providing frequent eye contact).

12. When presenting materials at the chalkboard or overhead, use a pointer to cue the student.

Strategies to Facilitate Homework Completion

Students sometimes have difficulty getting materials home to be able to do the assignments. The following are suggestions for organizing homework at school so assignments can be successfully completed at home.

1. Teach the student how to keep a homework assignment notebook (e.g., at the end of each class period record any assigned homework).

2. Cue the student to place homework assignment materials in a separate location at the end of each period.
   a. place a box, bin, or folder on a shelf in the room
   b. hang a large, heavy manila envelope from side of the student's desk with tape.
   c. obtain a separate book bag for homework.
   d. place a backpack or other bag on the back of the chair.
   Place homework assignments in the pack as they are assigned.

3. As homework is assigned, prepare a packet for the target student which will be taken home at the end of day.

4. Decrease amount of the homework assignment (e.g., give five problems instead of ten) to reinforce task completion.

5. Provide direct and concrete expectations (i.e., "This paper is to be turned in to Mrs. Jones at 8:00 a.m."). Create a timeline of assignment due dates with the student.

6. Teach the student how to keep a calendar for assignments. Teach the student time management strategies, such as estimating task length and planning when and how the task can be completed.

Strategies to Facilitate the Student's Ability to Copy From the Chalkboard or Overhead

Students with learning problems may have difficulty copying from the board. They may be able to read what is on the board but be unable to reproduce the material on their paper. This could be due to poor short-term memory, difficulty transferring a vertical perceptual image to a horizontal one, difficulty keeping/relocating the place on the board, or problems re-creating the forms (letters or numbers) with the writing utensil.

1. Provide oral directions along with the written directions placed on the board.
2. Provide the student with a written copy that may be used at the desk.
3. Allow the student to look on with another student to check the copying accuracy.
4. Move the student close to the board or screen and decrease visual distractions between the student and the image to be copied.
5. Write material in different colors for each line; this will provide an additional visual cue for the student.
6. Teach the student to transcribe the work from an audiotape that you make of the materials.
7. Create an alternate strategy for accomplishing the learning objective.

Strategies to Facilitate Attention to Task
Adapting the Environment

Students who are having difficulty with classroom participation and task completion can be distracted by many types of stimuli (e.g., noise, objects, movement, bumping). Minimizing the effects of these naturally occurring stimuli increases the student's ability to focus on classroom activities and complete tasks in a timely manner.

1. Seat the target student in an area of the classroom which provides the least amount of unpredictable activity. Classrooms are active environments, but many activities are routine and predictable, and so students can tolerate them more easily. Consider the frequency of activity and its predictability when choosing a seating location. For example, placement close to the teacher's desk may enable the teacher to monitor the student's performance, but may also be the hub of activity for the classroom, creating many distractions. It may be more useful to select corners of the room that are away from traffic areas for target students. Avoid other high traffic/high activity areas, such as the doorway, the coatrooms, the bathroom entrance, the shelf which contains handouts or readers and the small group work table.

2. Use study carrels or other designated study areas to reduce the amount of the visual environment with which the student must cope. Study carrels with sides also reduce noise from surrounding spaces.

3. Whenever possible, create work groups for this student. This will facilitate attention to activity and allow the teacher to monitor the student's progress more easily.

4. Identify the type of stimuli that distracts the student and select work areas which have the lowest incidence of these stimuli. For example, a student who is distracted by noises may do well in a corner away from the door which has a busy bulletin board on the wall. Although the bulletin board is a very strong visual stimulus, it will not bother this student; the persons walking up and down the hall would, however.

5. Organize the students desk and supplies so that the work surface is clear of everything, except what is needed to complete each assignment. For example, place all the necessary items for a classroom task (e.g., math lesson) on one lunch tray. Place the lunch tray on the student's desk at the beginning of the lesson.

6. Incorporate physical movement into work time in the classroom. Provide opportunities for the student to get out of the seat (e.g., get a drink or bring paper to teacher's desk).

7. Create a schedule for the student within which activities change frequently. The change of pace facilitates attention to the new task each time.

Strategies to Facilitate Orientation in the Overall Educational Environment

Some students have difficulty orienting themselves within the overall educational environment. For example, they may not be able to find learning stations within the classroom, or may get lost traveling from one classroom to another or from one area of the school building to another. These students need assistance to map the environment in concrete ways.

1. The class can create a map of the classroom, which includes significant landmarks and clear labeling of storage, work, and traffic areas. The map can be used by all students in the classroom.

2. If it is inappropriate to create a map as a class project, make one with the student. Obtain cues from the student about what information would make the map more helpful.

3. Color code areas of the classroom so the student can associate a color with a particular learning or work task (e.g., the reading table, the puzzle area, coded yellow and materials coded red).

4. Arrange the student's class schedule so that the student can remain in one classroom or portion of the building for large portions of the day (e.g., one place in the morning and another in the afternoon).

5. Pair the targeted student with someone who has the same class schedule, to provide naturally occurring cues for movement within the school building.

6. Place signs in key locations around the school which provide useful cues for the student. Examples include:
   * post class times and subjects outside each room; highlight the target student's time slot
   * place color-coded signs on rooms which correspond to the target students' notebook for that subject
   * place arrows on the wall at key choice points (e.g., a hallway branch which is likely to cause difficulty)

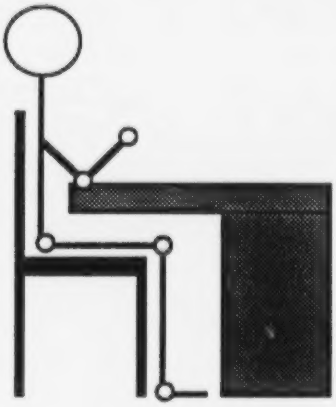
7. Place colored tape along hallways which indicate how to get to key locations (e.g., the yellow line leads to the music room, the blue line leads to the office).

Components of Optimal Seating for Students

When a desk is the proper size for a student, it is easier for the student to sit quietly in the desk and complete seat work. The following guidelines ensure proper fit of the desk for the student. An occupational or physical therapist can assist with adaptations to ensure proper fit.

With student sitting in the chair, be sure that:
a. the back rests against the back of the chair
b. the hips are bent to 90 degrees (a right angle)
c. the knees are bent to 90 degrees
d. the ankles are bent to 90 degrees
e. the feet are flat on the floor

When sitting at the desk, be sure that:
a. the table hits the student at mid chest-height
b. the elbows and forearms can rest comfortably on the table



Strategies to Facilitate Independent Mobility Within the Education Environment

Some students may not be able to get from one place to another within the time frames normally allotted. They may not have the physical strength or coordination to move as fast as their classmates (e.g., with cerebral palsy) or may use equipment such as wheelchairs or crutches to move about in the environment. Listed below are suggestions for facilitating the students' transition between classes, or other educational settings.

1. Arrange the student's class schedule so that morning classes are clustered at one side of the building and the afternoon classes are in another.

2. Allow the student to leave each class a few minutes early to get to the next class on time. Give class assignments at the beginning or middle of class, rather than the end of the class period, or prepare written assignment sheets for students so the target student does not miss homework assignments.

3. Provide space in each classroom for the student to keep books and materials that are not needed for homework. This will decrease the time needed to gather materials to get to the next class, and decreases the amount the student must carry between classes.

4. Consider if a means of wheeled mobility would be appropriate. Can student propel him/herself more quickly on a scooter board? Would a wheelchair for long distance transport (class to class, to bus, etc.) be a "least restrictive" alternative? For younger students who are developing mobility skills, make a game out of getting from class to class by timing student with a stopwatch; chart performance on a graph to record improvements as they occur.

5. Create a reinforcement mechanism to reward the student for moving about in an efficient manner within the education environment.

6. In some cases, it may be more beneficial for the walking student to use a wheeled device for getting around in the school. This option is useful if walking expends a great deal of energy which might decrease the student's ability to attend to and complete school tasks. Consider a range of options (e.g., a scooter board, a wagon, a wheelchair, an electric car) to best match the student's needs and the school environment's characteristics.

Strategies to Facilitate Gross Motor Skills

Effective use of the body for movement is called gross motor coordination. Many activities facilitate the development of gross motor skills. The following list contains suggestions to assist one in getting started.

1. Teach the children a variety of ways to play on a swing:
    a. As the children are lying prone (on the stomach) in the swings, have them push off the wall or another person with hands and/or feet.
    b. Have the children sit straddling the swing while swinging front to back and side to side.
    c. If the swing allows, twist the swing in a circular motion, then let the swing unwind so the children can spin.
    d. While the children are lying on their stomachs, have them throw bean bags at a target. As skills improve, have the children throw objects at a target while gently swaying in a swing.

2. Teach the children rope activities:
    a. Teach children to jump rope; begin with jumping over a rope placed on the floor, then increase height of rope, sway the rope and finally turn the rope. Then teach the children jump rope games.
    b. Have children pretend to be a mountain climber by leaning back while holding onto a rope which is attached to a stationary object. While holding the rope taut the children can move in a forward motion, and then can "repel down the mountain" using a backward movement.
    c. Teach the children jump rope patterns with Chinese jump ropes (elastic stretched around two children's ankles; other children jump in, around the elastic rope, catching and releasing the elastic with their feet.
    d. Play tug-o-war.

3. Show the children how to play with balls:
    a. Play dodge ball. Have children stand against the wall and try to dodge the ball as you throw it at them.
    b. Play catch with children using various balls (e.g., smaller or larger, lighter or heavier). Show the child how to put more force behind the ball while throwing it.
    c. Have the children roll a ball across the room using a stick, bat, or golf club to guide it.
    d. Have children throw the ball at a target on the wall or a basket on the floor. Start with them standing fairly close and increase the distance as skills increase.
    e. Use a large ball for a "seat" as they complete table top activities.
    f. Have the children catch the ball with one or both hands; throw the ball in the air and catch it.
    g. Have children dribble the ball standing still, then walking and running; require them to alternate hands while dribbling.

4. Play games with a balloon as if it were a ball.
    a. Have children hit the balloon into the air with a paddle or a paper plate.
    b. Have children play "volleyball" with a friend.
    c. Have children hit the balloon using different body parts.
    d. Have children kick the balloon into the air and catch it.
    e. Have children see how long they can keep the balloon up in the air. They can be allowed to move freely around the room, or have to stay within a specified area.

5. Use a cloth tunnel with a wire skeleton inside it for activities (can be purchased at a children's toy store).
    a. Have children crawl forward and backward through a tunnel.
    b. Have children throw or push a ball through the tunnel; have the child roll a ball back and forth to a partner.
    c. Have children stand and place the tunnel over the child (vertically). Then have the child try to push the tunnel down to floor, and step out of it.
    d. Have children roll across the room inside the tunnel.
    e. Have two children crawl through the tunnel, starting at opposite ends and crawling over/under each other when they meet inside.
    f. Use the tunnel as a part of an obstacle course.

6. Have the children roll the barrel across the room; place objects in the way to increase difficulty. They can go over or around the object.

7. Teach children games on the chalkboard; the large movements in the vertical plane are helpful:
    a. Have children practice writing on the chalkboard; add interest by using colored chalk. Have the children write using large motions.
    b. Give the children a piece of chalk in each hand. Have them do the same thing with each hand, such as a vertical line, horizontal lines, or circles.
    c. Draw a "road" on the chalkboard. Have children draw a line through the road or move a small car over the road.
    d. Play a game of "cat and mouse" by drawing dots on the chalkboard; have children draw a line from one dot to another.
    e. Write the numerals 1 - 5 on the chalkboard in a random pattern. Have the children do the same. The therapist connects one set of numerals and they must then connect the other set without crossing the therapist's line. This activity requires motor planning.

8. Place squares on the floor and require the children to keep their feet "frozen" on their square. Create activities which require the children to shift body posture and cross midline.

9. Teach the children various animal walks and jumping or hopping patterns.

10. Incorporate common gross motor objects into the childrens' play repoirtoire:
    a. hippity hop
    b. hula hoop
    c. frisbee
    d. riding toys
    e. tires
    f. scooter boards
    g. barrels
    h. scooters

11. Encourage children to play on playground equipment.

Adaptations to Physical Education Activities

Students with learning problems and/or physical disabilities may have difficulty participating in physical education. Good rapport between the therapist and the P.E. teacher facilitates effective program planning. The following suggestions address ways to modify activities for optimum student participation in physical education.

1. Select non-competitive sports which require students to compete against their own performance. Provide graphs/charts on which each student can chart progress (e.g., number of seconds standing on 1 foot, number of steps on balance beam, or number of times a target is hit or a ball is caught).

2. If a student with a physical disability is in the class, provide adaptive equipment such as:
    a. Wheelchair volleyball, basketball, or tag. Have another student push the student's wheelchair, or scooter board for at least part of the session, if endurance or speed is a problem. This will free the student to participate better, and increase social interactions.
    b. Use an oversized bat for softball.
    c. Use oversized balls for games with targets.
    d. If a child has poor balance or endurance provide a chair for calisthenics, ball passing, etc.
    e. Lower basketball goal/volleyball net.
    f. Use larger scooter boards.

3. Adapt the game/activity for student's participation, for example:
    a. allow student to bat, but have designated runner; double up on outfielders so student can play.
    b. Allow the student's standing line to be closer to the target.
    c. Allow student to walk on lines on floor instead of using balance beam.

4. For strength and endurance activities, set the student's own baseline and encourage to improve from that point.

5. If a P.E. activity is too difficult or cannot be adapted easily for student, provide alternative activities they cando by themselves. Assign a rotation within the class so that other students work with the target student, so they are not alone or isolated. Examples of appropriate activities could include:
    a. Specific progressive/resistive exercises.
    b. Lifting weights.
    c. Walking laps around gym (Poor balance, endurance, or uses walker).
    d. Box hockey and shuffle board can be done from a chair.
    e. Most children can play with balls in any position (i.e., sitting or laying down; throwing, catching, kicking, rolling). A medicine ball or weights on child's extremities can increase the difficulty/physical benefit of such activities.

Therapeutic Activities Using a Balance Beam

These activities are designed to develop a child's balance and postural stability skills. Activities can be started on the ground and moved to more difficult levels (e.g., taped line on floor, beam on floor, beam up two inches, beam up four inches; beam of 3 inches width, beam of 1 1/2 inch width, beam of gradient width, going from large to small). If you don't have access to a balance beam, or can't transport or store a full sized beam, locate a 3 to 4 foot length of sanded 2x4 board from a shop class or lumberyard.

1. Have the child crawl across the balance beam.
2. Have the child lie on back or stomach on the balance beam.
3. Have child stand on balance beam for as long as possible.
4. Have the child walk forward or backwards on the balance beam.
5. Have the child step over a small object while walking on the balance beam.
6. Have the child slide along the balance beam (forward, sideways), or walk heel to toe.
7. Have the child stand on the floor and hop or jump from one side of the beam to the other in a forward, backward, and sideways direction.
8. Have the child change directions while walking on the balance beam.
9. Have the child play catch while standing or walking on the balance beam.

Therapeutic Activities Using Pages From a Coloring Book

Fine motor control and eye-hand coordination can be facilitated in a number of ways. Tracing and coloring provide practice and task variety for improvement of these important skills.

1. Have the child trace a picture from the coloring book.
2. As the child is coloring, point out which object to color; tell which color to use; provide instruction about how to color (e.g., use small circles moving fingers only, color in a vertical or horizontal movements).
3. Place the page being colored on top of a piece of sand paper, a fine screen, etc., to provide kinesthetic input.
4. Make a transparency of a page from the coloring book. Using an overhead projector, show it on a large piece of paper on the wall. Have the child trace the picture and then color it.
5. Allow the child to color a page lying on the stomach on the floor, standing up holding paper against the wall, or kneeling at a table.
6. Provide the child with a variety of drawing media. Magic markers (scented/unscented), chalk, crayons of different sizes/shapes, colored pencils, etc.

Therapeutic Activities Using Common Objects

Small objects are frequently used in the classroom to teach a variety of concepts to children (e.g., sorting, counting). They are also useful for the development of fine motor skills.

1. Create a bin filled with paper clips, safety pins, etc. Direct child to pick them up and place them in specific places. Have time trials to see which objects are "faster" to pick up. 15 to 30 seconds is an adequate amount of time for each trial. Keep a chart and let each child beat "personal best".
2. Find small objects that the child can load into trucks. Load the truck by pretending the child's hand is the crane, picking up only a few pieces at a time with the fingers.
3. Have the child unscrew nuts, bolts, and washers of various sizes, then separate into containers of similarly sized and shaped items. The child can also reassemble.
4. Have the child identify objects of everyday use by touching them without being able to see objects (i.e., comb, toothbrush, key, pencil, block, etc.).
5. Collect everyday items (i.e., shoe, belt, knife, pair of glasses, pencil, comb, etc.) in a box. In a second box have picture of the same items. Have the child find the picture that matches the object they hold which you pick on it.
6. Dried seeds provide an excellent medium for sorting. The seed assortment might contain kidney beans, lima beans, calico beans, northern bean, and popcorn kernels. This can be made fun by gluing the beans on construction paper to make a picture.
7. Buttons may be sorted by size and color. They can be placed in a plastic bottle to make noisemakers, or threaded together to create jewelry.
8. Wooden beads may be sorted by shape and color. Have children string them together.
9. Use muffin pans, egg cartons, small plastic containers, small aluminum pie pans, or paper cups for sorting activities. In the beginning, use exact number of containers needed for the sorting activity.

Therapeutic Activities Using a Ladder

The following activities are designed to develop a child's motor planning abilities, body awareness, dynamic balance, eye-foot coordination, bilateral coordination, and overall gross motor coordination skills.

1. With the ladder in an upright position, have the child climb ladder, jump off the ladder from different heights.
2. Lay the ladder down on the floor and have the child walk across the rungs of the ladder.
3. Have the child crawl through the ladder when it is placed on its side.
4. Have the child jump or hop through the spaces in the ladder when it is placed on the floor.
5. Have the child bear-walk, bunny-hop, or crab-crawl through the rungs or on the parallel boards of ladder.
6. Have the child walk with one foot between the rungs and the other foot outside the ladder.
7. Have child hop and jump through rungs of ladder.

Therapeutic Adaptations for Painting

1. Use a variety of materials for painting including glue, shaving cream, and pudding.
2. Mix different textures into the paint. (e.g., sand, paper punches, starch, flour, or gravel).
3. Vary the size of paper the child uses to paint. Children can use bigger movements when the paper is larger.
4. Mix paint with marbles inside a box lid. Ask the child to use two hands to hold the lid and move the marbles around.
5. Have the child paint with string.
6. Vary the size of paint brushes, or use sponges cut into different sizes and shapes.
7. "Paint" by squeezing drops of food coloring on slightly damp paper.
8. Paint the sidewalk or blacktop with water, soapy water, or water colors.
9. Let child paint in bathtub with colored soap markers.

Therapeutic Activities Using Paper

Paper can be used in a wide variety of ways, providing many opportunities for practicing perceptual and motor skills.

1. Make paper chains. This activity incorporates cutting with scissors, folding, pasting, and perceptual organization.
2. Have the child punch holes in paper using a paper punch, as part of art projects.
3. Use different kinds of paper for activities (e.g., different colored construction paper, cardboard typing paper, tissue paper, sandpaper). Each provides a different type of resistance, flexibility and tension.
4. Vary the placement of the paper. Have the child do activities with the paper taped to the wall, on a table, at the desk, on the floor, on a slanted board.
5. Crumble newspaper pages into large balls, small balls, tight balls, or loose balls. Have the child throw them into a basket or at a target.
6. Tear various weights of paper into small pieces requiring the child to use a fine pincer grasp. The pieces can be used as confetti or in an art project.
7. Fold a piece of paper one or two times, diagonally, horizontally, etc. Have the child copy or imitate the same folding pattern.

Therapeutic Group Activities Using a Parachute

If a parachute is not available, a sheet can be substituted.

1. Have a child sit in middle of a parachute. Instruct the class to hold onto the parachute as they walk along in a circle and spin the student.

2. Have a child sit in the middle of parachute. Two adults can lift the parachute, making a hammock, and rock the child back and forth.

3. Have a child place a ball in the center of a parachute. Have the children raise and lower the parachute, trying to keep the ball in the center.

4. Have the children raise and lower the parachute. Call out a few students' names and have them run under the parachute to the opposite side, trying to get across before the parachute drops.

5. Instruct the children to roll up the edges of the parachute as tightly as possible, to decrease movement of the parachute.

6. Instruct the children to lift the parachute up, pull it behind them over their heads and sit on it. Everyone is then inside the parachute as it billows above.

7. Have the children stand up, then pick up the parachute. Instruct them to walk quickly, slowly, hold the parachute high or low as they walk around in a circle.

Therapeutic Activities Using Puzzles

Puzzles challenge perceptual organization skills. A child must be able to visualize how the parts of a picture fit together. These perceptual skills are also important for other learning tasks such as map reading, or geometry.

1. Use picture from magazines, advertisements, etc. to make a puzzle of familiar products. Cut into two pieces. When the child has mastered this, cut the puzzle into more pieces.
2. Have the child draw a picture. Paste onto cardboard and cut into puzzle pieces. The parts will be familiar to the child.
3. If only a small number of puzzles are available, or if the puzzles have only a few pieces, increase the complexity by using two or three puzzles at the same time.
4. Puzzles with peg handles are appropriate for very young children, or a child with poor grasp.
5. Let the child put puzzles together while maintaining the body in various positions (e.g., propped on elbows, hands and knees, half kneeling, tall kneeling, or standing).
6. Ask child to sit on an unstable surface while putting a puzzle together (e.g., a tiltboard, barrel, or T-stool). Activity combinations such as these combine the requirement of postural control with cognitive and perceptual demands.

Therapeutic Activities Using Scooter Boards

The following activities are designed to increase a child's motor planning, body awareness, overall strength and endurance and to be fun! These can be done with an individual student, group, or incorporated into a P.E. class.

1. Have children lay on their stomachs or backs or sit (legs crossed or underneath them) on the scooter boards. Then they can:
   a. be pulled around while holding onto an object (e.g., rope, hula hoop, towel, bat, broom handle, rubber tubing)
   b. push themselves in a circular motion
   c. spin themselves in a circle
   d. make a "train": have children grab each other's ankles (lying); wrap legs around another child's waist (sitting)
   e. push themselves off wall with hands or feet, pretending to be a rocket
   f. push themselves between adult's legs
   g. catch a ball thrown to them while cruising across the gym
   h. grabbing or touching an overhead hula hoop with one or both hands
   i. move around the room with objects placed on their backs, or stomachs
   j. using a hallway, have the children push themselves between the two walls, hands on one wall, feet on the other
   k. ride down a ramp; with a heavy object on back; crash into a wall of boxes; go under a rubber strip (e.g., a piece of inner tube) suspended between two points trying to catch the strip with their hands
   l. push themselves forward and backward quickly without picking hands up off the floor
   m. move across the room using a plunger in each hand
   n. push themselves along a path on the floor, carrying a sand bag in one hand
   o. move through a maze of boxes or cones
   p. pull themselves across the room using a rope that is secured on one end
   q. complete an activity while on the scooter: (e.g., place puzzle pieces on one side of room, and designate a place to put the puzzle together in another area of the room, have the children get 1 piece of the puzzle at a time, as in a relay).

2. Many scooter board activities can also be done with the students in tall kneeling or standing positions. This requires a higher level of dynamic balance, and should be done only with a child who is secure and safe when participating in scooter activities in the sitting position. Close supervision is a necessity in these activities.

3. The children can also push/pull another child or adult on the scooter.

Therapeutic Activities Using Shape Cards

Make shape cards by cutting the primary shapes out of cardboard. The cards can be used for many individual and group activities which combine cognitive and motor skills.

1. Give directions that when the triangle is shown the children clap hands. When the square is shown they tap their toes. Change or add directions as the child improves.
2. Have two identical sets of shape cards. Expose a short series of shapes. Have the child place the same series of cards on the table (start with a matching task, and then do it from memory).
3. Have the children find objects in the room that match the shape on the cards.
4. Have the child choose a card and try to draw it on paper.
5. Have the children try to make their own bodies look like the shape on the card.
6. Mount small catalog and magazine pictures which show an everyday object with a familiar geometric shape. Examples: a cracker, clock, or cushion in a circle shape; a window or table in a rectangular shape. Direct the child to sort these pictures by shape. The child may select a specific shape, or the sorting may be done in piles in the center of the table.

Therapeutic Activities Using Soap Bubbles

Soap bubbles provide a medium for developing eye-hand coordination, visual tracking and oral motor control. Since students enjoy playing with bubbles, it is frequently a good activity selection.

1. Blow the bubbles for the child. Have the child pop the bubbles; specify which finger, or number of fingers the child can use. Select other body parts, such as feet, elbows, or chest. Change initial body position to encourage different patterns of movement (e.g., propped on elbows, sitting on a tiltboard, tall kneeling, 4 point position, 1/2 kneeling, or up on tiptoes.).

2. Ask the child to count the bubbles as they are popped.

3. Teach the child to blow the bubbles. Encourage the child to blow bubbles towards a specified object. As the child gets stronger, increase the distance to the target object to require harder blowing.

4. Place bubble mixture in a bowl or other container.
   a. Have child blow through a straw into a mixture and make bubbles.
   b. Have child make bubbles using a kitchen whisk or beater.

5. Teach the child how to use a big bubble wand; this incorporates large motor movements into the eye-hand coordination task.

Therapeutic Activities Using Tires

These activities are designed to be fun and enhance the development of children's body awareness, balance, strength, and overall gross motor development. This "equipment" can be easily incorporated into P.E. or recess activities.

1. Have the children push a tire across room with their hands or feet.
2. Have relay races with the children carrying a tire around their waists or on their shoulders.
3. Have the children play bumper cars while carrying tires around their waists as bumpers.
4. Place the children's feet inside a tire and have them crawl or walk across the room.
5. Have the children straddle an old tire and bounce on it.
6. Have the children run, jump, or hop through an obstacle course of old tires.
7. Have the children do different animal walks through an obstacle course made out of old tires.
8. Have the children crawl or walk through tires.
9. Have the children run, jump or hop while rolling a tire.
10. Place the children inside several tires, and roll them across the room .

OCCUPATIONAL THERAPY NOTES

Student's Name:____

School:____

M.O.R.E.

MANAGING OCCUPATIONAL THERAPY IN RURAL EDUCATION

OCCUPATIONAL THERAPY DATA SHEET

Student: ______________________________ **Teacher:** __________

Goal: ______________________________ **Year:** __________

DATE																					

Occupational Therapy Education
The University of Kansas Medical Center
Kansas City, Kansas 1990

OCCUPATIONAL THERAPY DATA SHEET

Student: ______________________________ **Year:** __________

DATE ACTIVITIES										

Occupational Therapy Education
The University of Kansas Medical Center
Kansas City, Kansas 1990

Time Management Issues

Many therapists have inquired about appropriate caseloads for school based practice. This is a difficult issue. Therapists want to be helpful, and so tend to increase their caseloads ad infinitum. Occupational therapists must consider the point at which students are not actually benefitting from their expertise, because the service provision is so diluted that its effects are diminished. The other danger in this 'helping' approach is that others may begin to feel that occupational therapy doesn't have any impact, which can lead to questions about why we are in the schools at all. The American Occupational Therapy Association has created recommended guidelines for caseload determination, which are available in the book Guidelines for Occupational Therapy Services in School Systems, 2nd ed. (1990). Rockville, MD: The American Occupational Therapy Association, Inc.

The following entry is excerpted from:

Chapter 6: Designing Pediatric Service Provision in Pediatric Occupational Therapy: Facilitating Effective Service Provision, edited by Winnie Dunn. Copyright 1990 by SLACK Inc. Reprinted with permission.

TIME MANAGEMENT ISSUES

DETERMINATION OF CASELOAD

An important aspect of the service provision process is the determination of an appropriate caseload. Too many children on a caseload interferes with attention to individual needs. Therapists establish caseloads that acknowledge the variety of tasks that are required within the service provision process, and provide a mechanism for interacting with significant individuals such as family members, other team members, referral sources and administrators.

There are three task categories in the determination of caseload. The first category is comprised of the non-service provision tasks. This includes activities such as travel, lunch, and supervisory responsibilities. The time needed in this category is calculated by adding the actual time spent in each of these tasks. The second category is comprised of associated service provision tasks, such as team meets and assessments. These tasks contribute to the service provision process by providing time for interaction and data gathering. An exact amount of time for these tasks is difficult to determine, due to variance from week to week or by the time of year (e.g., more assessments at the beginning or end of the school year for school based therapists). An average amount of time spent per week is estimated. The time spent in these two categories is added and the total subtracted from the total time available in the work week. (see figure 6-10 for an example).

Total time available per week: 40 hours
-total of categories one and two: x hours
Time available for service provision: hours

The third category is comprised of actual service provision tasks. Service provision includes both the time spent with the individual and the time needed to prepare for the intervention and document those interactions properly. Documentation provides a written record of the actions taken and decisions made on behalf of the individual. Chapter Eight provides an informative discussion about effective documentation strategies. An 80/20 ratio between time spent providing services, and time spent in related preparation and documentation has been suggested (AOTA, 1987). Use of ratio means that for every four minutes of service provision, an additional one minute is set aside for preparation and documentation. For example,

*....for 30 minutes of service provision, addition 7.5 minutes are needed for preparation and documentation, for a total of 37.5 minutes. This translates to 0.625 of an hour (37.5 minutes/60 minutes = 00.625).

*....for a 60 minute service provision session, an additional 15 minutes would be needed for preparation and documentation. This total of 75 minutes translates into 1.25 hours. (75 minutes/60 minutes = 1.25).

The therapist uses decimals such as these to determine the number of slots available for intervention:

hours available for service provision = no. of intervention
decimal representing length of sessions = slots available

If the therapist sees children for thirty minute sessions, but sees children twice per week, then the total from the above calculation must be divided by 2 to arrive at the number of individuals that can be served. If the therapist sees children once a week for 60 minutes, then the total obtained from this division represents both the number of slots available, and the number of individuals who can receive intervention. When children are seen in groups, the total amount of time for the group is divided among the members to keep calculations consistent, and to accurately represent the amount of therapist time that is dedicated solely to each individual. All these options are combined to produce a more realistic schedule that is responsive to individual needs (e.g., some individually addressed in direct service, monitoring, or consultation; some seen in groups; some session 30 minutes per week, and some sessions 60 or 90 minutes per week). Figure 6-11 provides an example of service provision calculations.

A maximum caseload of 40 is recommended by AOTA (1987) for any school-based therapist. However this figure is probably too high if travel, supervision, or other duties are a regular part of the work week. Professionals must consider seriously whether children are actually receiving effective occupational therapy service when caseloads exceed recommended numbers.

SCHEDULING AND TIME MANAGEMENT

Efficient scheduling and management of time is one mechanism that allows therapists to adequately address the needs of all children on a caseload. Scheduling requires planning to increase efficiency. For example, therapists who schedule children in one special education classroom for services during a large time block, will more efficiently accommodate for scheduling problems, such as student absences, than will the therapist who schedules children for individual time slots (e.g., Campbell, 1987 a&b). Scheduling all children receiving services, who are assigned to the same public school cluster group, is another way of scheduling to manage time more efficiently. Similarly, scheduling home visits for all children in the same area of the city on the same day, decreases the amount of time that may be required for travel. Therapists also consider creative plans for scheduling intervention with particular children. For example, a more intense direct service and monitoring schedule, over a shorter period of time, may enable a child to become successful more quickly in a regular education placement, than if that same child received those services spread out over the entire school year. Problems concerning scheduling and time management are challenging issues for occupational therapist. Creative solutions that are responsive to the organizational structure of the school or early intervention program, are possible when therapists consider all options for service provision and maximally utilize available resource personnel.

USE OF EQUIPMENT AND MATERIALS TO ENHANCE INTERVENTION OUTCOMES

Therapists frequently use special types of equipment and materials to carry out intervention programs. The equipment and materials are chosen because of the properties necessary to achieve functional outcomes. Therapists who achieve intervention objectives, have many alternatives available to them from children's environments. For example, equipment that provides an unstable surface to facilitate postural weight shifts may include not only a therapy ball, but also a high density foam block (available through furniture upholsterers), the cage ball from physical education, or rocker boats and other elementary equipment available when therapists use available resources, but also skills are more likely generalize to functional life tasks. The objective of the intervention provided to develop postural shifting, is to enable the child to use this skill in functional situations, such as when using playground equipment. Skills are more likely to be established for function use when natural, rather than contrived types of equipment are selected.

PROVIDING COMPREHENSIVE SERVICES

Many agencies have different purposes when providing early intervention or special education and related services. The purpose of early intervention is to provide services designed to meet the developmental needs of children and the needs of families related to enhancing their children's development. Public education programs for children with disabilities are structured to provide education and those related services necessary for children to benefit from education. Hospitals and other community agencies have as their missions to provide services for special purposes, such as medically-related health, financial assistance, work preparation and training, or mental health programs. Pediatric occupation therapists may be employed in any number of settings by a wide variety of agencies. Occupational therapy services provided under that agency's administration and financing are aligned with the purpose of the agency. For example, services provided in public education settings enable children to benefit from educational opportunities. Addressing all of the concerns identified through assessment is appropriate only when all areas of concern negatively impact on the child's participation in education. Areas of concern that do not influence a child's educational a child's education performance are addressed by other community agencies or resources.

Each occupational therapist has professional goals and purposes. It is important for therapists to define these purposes clearly for themselves so that chosen professional activities enhance goal attainment. Employment choices play a major role in either enhancing, or blocking professional goal attainment, with the best outcomes occurring when the mission of the employing agency and one's professional goals are aligned. Agency purposes often require professionals to play a variety of roles and perform a wide rang of responsibilities. For example, a role that occupation therapists may be required to play in early intervention programs is that of a case manager or service coordinator for specifically assigned families. Similarly, many therapists employed in school settings may be responsible for coordination of children's therapy services with those being provided by other community agencies or medical facilities. Traditional roles of occupational therapists are expanding as current practices with infants and children change to better reflect current public policy and legislation.

Fact Sheets on Common Disabilities

The National Information Center for Children and Youth with Handicaps (NICHCY) has created a wide range of materials for public use. This section contains a sample of their information sheets on common pediatric disabilities. They are useful for teachers and parents and were very helpful to our preservice students.

Please write to NICHCY to obtain a complete list of information sheets that are available.

National Center for Children and Youth with Handicaps
P.O. Box 1492
Washington, D.C. 20013
(703) 522-3332

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NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

CEREBRAL PALSY

Definition

According to the United Cerebral Palsy Associations, Inc., cerebral palsy is a group of disabling conditions caused by damage to the central nervous system. "Cerebral" refers to the brain, while "palsy" describes lack of muscle control that is often (but not always) a nervous system symptom. Cerebral palsy can be mild or severe.

Damage to the brain may occur before or during birth because of illness in pregnancy, premature delivery, or lack of oxygen supply to the baby; or it may occur early in life as a result of an accident, lead poisoning, illness, child abuse, or other factors.

Incidence

Approximately 700,000 Americans (or 16 out of every 5,000) have some degree of cerebral palsy. Ten thousand babies with the disorder are born each year, and another 2,000 acquire it in the early years of life.

Characteristics

Four main descriptions of cerebral palsy have been identified:

1. Spastic - the most common type, which results in tense, contracted muscles;
2. Athetoid - characterized by constant, uncontrolled movements;
3. Ataxic - typified by poor sense of balance and depth perception; and
4. A combination of the types of cerebral palsy listed above.

The effects of cerebral palsy depend on the extent and location of the brain damage. One or more of the following conditions may occur:

- seizures;
- problems in vision, hearing or speech;
- abnormal sensation or perception;
- impaired cognitive functioning, including mental retardation; and/or
- impairments in arm and leg movement.

Educational Implications

Early identification of cerebral palsy can lesson developmental problems and lead to appropriate treatment when it helps most. Special educators and physicians have discovered that early intervention can make an important difference. Early intervention programs enlist parents and other family members to work with the child in specific activities. These activities for children with cerebral palsy may include:

- speech and language therapy;
- occupational therapy;
- physical therapy;
- medical intervention; and
- social services.

Among the services that the older child with cerebral palsy may need are: attendant care, continuing therapy, special education, counseling, vocational training, and recreation training. The services required will vary from person to person depending on the nature and severity of the handicap.

Treatment of cerebral palsy requires close cooperation between the individual and the family, along with cooperation with educational, medical and social services. To promote personal growth and independence, parents and teachers should avoid overprotection and encourage children to take risks within the limits of safety and health. Teachers and classmates should understand that, although children with cerebral palsy have a physical disability, they are more like their classmates than different.

Important advances have take place in the last 15 years which have had a great effect on the long-term well-being of children born with cerebral palsy. Advanced technology has been applied to the needs of persons with cerebral palsy, including computers and engineering devices. Technological innovations have been developed in the areas of speech and communications, self-care, and adapting employment. The future may bring even more significant applications.

Another important development has been the increased ability of persons with disabilities, including those who have severe disabilities, to live independently in the community. Independent living opportunities exist in the range from group shared and supervised apartments to individuals with disabilities living on their own in the community with appropriate support services. Independent Living Centers, staffed and run by persons with disabilities, have proven to be important resources for persons with disabilities. For more information on independent living centers, please contact NICHCY.

RESOURCES

Finne, N.R. Handling the Young Cerebral Palsied Child at Home. 1975. (E.P. Dutton and Co., 2 Park Ave., New York, NY 20016.)

McDonald, E.T. Treating Cerebral Palsy: For Clinicians by Clinicians. 1987. (PRO-ED, Inc., 5341 Industrial Oaks Blvd., Austin, TX 78735.)

Prensky, A.L. & Pulkins, H.S. Care of the Neurologically Handicapped Child: A Book for Parents and Professionals. 1982. (Oxford University Press, 1600 Pollitt Drive, Fair Lawn, NJ 07410.)

Schleichkorn, J. Coping with Cerebral Palsy: Answers to Questions Parents Often Ask; 1983. (PRO-ED, Inc., 5341 Industrial Oaks Boulevard, Austin, TX 78735.)

ORGANIZATIONS

American Academy for Cerebral Palsy and Developmental Medicine
1910 Byrd Ave., Suite 118
P.O. Box 11086
Richmond, VA 23230-1086
804-282-0036

ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091
703-620-3660

National Easter Seal Society
2023 West Ogden Avenue
Chicago, IL 60612
312-243-8400
800-221-6827 (Toll Free Outside IL)

United Cerebral Palsy Associations, Inc.
66 East 34th Street
New York, NY 10016
212-481-6300
800-872-1827 (Toll Free)

United Cerebral Palsy Associations, Inc.
1522 K Street, N.W., Suite 1112
Washington, DC 20005
202-842-1266
(Toll Free Numbers)
800-872-2827 - Affiliate Relations Dept.
800-872-5827 - Community Services and Governmental Activities Office

NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

PHYSICAL DISABILITIES AND SPECIAL HEALTH PROBLEMS

Definitions

Orthopedic or physical disabilities describe medical or structural conditions which may be serious enough to disrupt the child's development and require special attention in school. Typical examples of orthopedic or physical problems include disabilities present at birth (such as missing limbs, spina bifida, etc.), as well as physical problems resulting from other causes (such as contractures caused by burns or fractures, etc.). In addition, neurological problems, such as cerebral palsy, may be included in this category.

Health impairments may result in limited strength, vitality and/or alertness. Asthma, cardiac conditions, sickle cell anemia, epilepsy, and leukemia are examples of health impairments that could interfere with a child's education.

Prevalence

One half of one percent (.5%) is the figure usually cited in estimates of school aged children with physical or health impairments. Cerebral palsy accounts for a large part of this percentage, followed by spina bifida.

Characteristics

Physical disabilities can produce a variety of characteristics. Children may experience a wide range of restrictions on their activity, from little or no to a complete restructuring of daily life. The most severely affected children may require intensive medical and educational help.

Physical problems may interfere with children's motor functioning, communications, learning skills, or social development.

Educational Implications

The contributions of such related services as physical, occupational, and speech and language therapy are often central to the education of children with physical disabilities. The greatest progress is achieved when therapy suggestions are consistently applied in the child's home as well as in school. This carryover strengthens appropriate feeding, positioning, and language stimulation patterns.

Architectural factors must be considered. Section 504 of the Rehabilitation Act of 1973 requires that programs receiving Federal funds make their programs accessible. This could mean structural changes (for example, adding elevators or ramps) or schedule or location changes (for example, offering a course on the ground floor).

Sometimes the nature of the child's disability requires changes in school equipment or curriculum. In the same way as a student's placement should be the least restrictive one for him or her, the day-to-day school pattern also should be as "normal" as possible.

Physical disabilities can have profound effects on children's emotions and social development. To promote growth, parents and teachers should avoid overprotection and encourage children to take risks within limits of safety and health. Teachers and classmates should also understand that, although children with physical disabilities and health impairments may be physically handicapped, they are more like their classmates than different from them.

Technology holds great promise for making the life of a child with a disability more "normal." Computerized devices, for example, can help nonvocal, se verely physically involved children communicate, perhaps for the first time.

Students who require recurring or long term hospital care for their condition may need special services such as tutoring or homebound instruction to keep up with their class. Depending upon the nature and severity of the condition, counseling for the entire family may be helpful.

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Umbreit, [illegible], & Cardullas, O. (Eds) Educating the Severely Physically Handicapped; 1980. (Special Press, P.O. Box 2524, Columbus, OH 43216)

RESOURCES

Accent on Information
P.O. Box 700
Guillum Road & High Drive
Bloomington, IN 61701

American National Standards Institute
1430 Broadway
New York, NY 10018
(212) 354-3300

American Coalition of Citizens with Disabilities
1346 Connecticut Avenue, NW
Washington, DC 20036
(202) 785-4265

Cancer Information Clearinghouse
National Cancer Institute
Bethseda, MD 20205
(301) 496-4070

The Candlelighters Foundation
2025 I Street, NW - Suite 1011
Washington, DC 20006

Division of Physically Handicapped
c/o The Council for Exceptional Children
1920 Association Drive
Reston, VA 22091

Epilepsy Foundation of America
4351 Garden City Drive
Landover, MD 20785
(301) 459-3700

March of Dime Birth Defects Foundation
P.O. Box 2000
1275 Mamaroneck Avenue
White Plains, NY 10605
(914) 428-7100

National Association of the Physically Handicapped
76 Elm Street
London, OH 43140
(614) 852-1664

National Easter Seal Society
2023 W. Ogden Avenue
Chicago, IL 60612
(312) 243-8400

National Library Service for the Blind & Physically Handicapped
Library of Congress
1291 Taylor Street, NW
Washington, DC 20547

National Rehabilitation Information Center
4407 Eighth Street, NW
Washington, DC 20017

United Cerebral Palsy Association
66 E. 34th Street
New York, NY 10016
(212) 481-6300

NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

VISUAL IMPAIRMENTS

Definitions

The term "legally blind", "partially sighted", and "low vision" may mean different things in legal and educational contexts. The educational definitions of the terms are given below.

- Visual handicap indicates that some type of visual problem has resulted in a need for special education.
- Blindness refers to a condition with no vision or only minimal (light perception). Blind students learn via Braille or other non-visual media.
- Low vision refers to limited distance vision. People with low vision are able to see items close to them. They use a combination of vision and other senses to learn, although they may require adaptations in lighting or size of print.

Visual impairments can include myopia, hyperopia, and astigmatism; problems in the visual field; and muscular problems that result in visual disturbances.

Incidence

The rate at which visual impairments occur in the general population increases considerably with age, especially after 65. For individuals under 45, the estimated incidence is 7 per 1,000; for individuals over 65, it is 44.5 per 1,000.

Characteristics

The effect of visual problems on a child's development depends on the severity, type of loss, age at which the condition appeared, and overall functioning level of the child. The child may be delayed in motor, cognitive, and/or social development.

A young child with visual handicaps has little reason to explore interesting objects in the environment, and thus may miss opportunities to have experiences and to learn. This lack of exploration may continue until hearing becomes motivating or until intervention begins.

Because the child cannot see parents or peers, he or she may be unable to imitate social behavior or understand nonverbal cues. Visual handicaps can create obstacles to a growing child's independence.

Educational Implications

The student with visual impairments should be tested early in order to assess remaining vision. Mainstreaming has been a successful way of serving the academically oriented student with visual handicaps. These students may need additional help with special equipment and modifications in the regular curriculum to emphasize listening skills, communication, orientation and mobility, vocation/career, and daily living skills. Students with low or limited vision may need help in using their residual vision more efficiently and in working with special aids and materials. Students who have visual handicaps combined with other types of handicaps may have greater need for an interdisciplinary approach and may require greater emphasis on self care and daily living skills. It is important that all members of the school team and parents understand the child's physical capabilities and limitations. To promote growth, parents and teachers should avoid overprotection and encourage children to take risks within the limits of safety and health. Teachers and classmates should also understand that, although children with visual impairments and children who are blind are handicapped, they are more like their classmates than different from them.

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Stratton, Josephine. The Blind Child in the Regular Kindergarten. 1977. (Charles C. Thomas, Publisher, 2600 South First St., Springfield, IL 62717)

When You Have a Visually Handicapped Child In Your Classroom: Suggestions for Teachers by Teachers. 1977. (American Foundation for the Blind, 15 West 16th Street, New York, NY 10011)

Willoughby, D.A. Resource Guide for Parents and Educators of Blind Children. 1979. (National Federation of the Blind, 1800 Johnson Street, Baltimore, MD 21230)

Yeadon, A., & Grayson, D. *Living with Impaired Vision: An Introduction*. 1979. (The American Foundation for the Blind Inc., 15 West 16th Street, New York, NY 10011)

Tannenbaum, Robin. *A Different Way of Seeing*. 1983. (The American Foundation of the Blind, Inc., 15 West 16th Street, New York, NY 10011)

RESOURCES

American Association of Workers for the Blind
206 North Washington Street
Alexandria, VA 22314

American Council for the Blind
1211 Connecticut Avenue, NW
Washington, DC 20036
(800) 424-8666 toll free
(202) 833-1251

American Foundation for the Blind
15 West 16th Street
New York, NY 10011
(212) 620-2000

American Printing House for the Blind
1800 Frankfort Avenue
Louisville, KY 40206
(502) 895-2405

Association for Education of the Visually Handicapped, Inc.
206 N. Washington Street
Alexandria, VA 22314
(703) 836-6060

Division for the Visually Handicapped
c/o The Council for Exceptional Children
1920 Association Drive
Reston, VA 22091
(703) 620-3660

International Institute for Visually Impaired 0-7 Inc.
1975 Rutgers Circle
East Lansing, MI 48823
(517) 351-6300

OR
14 Gay Street
Newtonville, MA 02160
(617) 527-0476

National Association for Parents of the Visually Impaired, Inc.
2011 Hardy Circle
Austin, TX 78757

National Association for the Visually Handicapped
305 East 24th Street, 17-C
New York, NY 10010
(212) 889-3141

National Eye Institute
National Institutes of Health
Building 31, Room 6A32
Bethesda, MD 20205
(301) 496-5248

National Federation of the Blind
1800 Johnson Street
Baltimore, MD 21230
(301) 659-9314

National Library Service
Division for the Blind & Physically Handicapped
Library of Congress
1291 Taylor Street, NW
Washington, DC 20542
(202) 287-5100

National Retinitis Pigmentosa Foundation
8331 Mindale Circle
Baltimore, MD 21207
(301) 655-1011
(301) 655-1190 (TTD)
(800) 638-2300

National Society to Prevent Blindness
89 Madison Avenue
New York, NY 10016
(212) 684-3505

Recording for the Blind, Inc.
20 Roszel Road
Princeton, NJ 08540
(609) 452-0606

NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

MENTAL RETARDATION

Definition

People with mental retardation are those who develop at a below average rate and experience difficulty in learning and social adjustment. The regulations for Public Law 94-142 (The Education for All Handicapped Children Act) provided the following technical definition for mental retardation:

> *"Mentally retarded" means significantly subaverage general intellectual functioning existing concurrently with deficits in adaptive behavior and manifested during the developmental period, which adversely affects a child's educational performance."*

"General intellectual functioning" refers to a score obtained on an intelligence test. Persons with mental retardation usually score 70 or below. Adaptive behavior refers to a person's adjustment to everyday life. Difficulties may occur in learning communication, social, academic, vocational, and independent living skills.

Mental retardation is not a disease, nor should it be confused with mental illness. Children with mental retardation become adults; they do not remain "eternal children." They do learn, but slowly, and with difficulty.

Incidence

Some studies suggest that approximately 1% of the general population has mental retardation (when both intelligence and adaptive behavior measures are used). According to data reported to the U.S. Department of Education by the states, in the 1985-86 school year, 686,077 students ages 0-21 were classified as having mental retardation and were provided services by the public schools. This figure represents approximately 1.7% of the total school enrollment for that year. It does not include students reported as having multiple handicaps or those in non-categorical special education pre-school programs who may also have mental retardation.

Many authorities agree that people with mental retardation develop in the same way that people without retardation, but at a slower rate. Others suggest that persons with retardation have difficulties in particular areas of basic thinking and learning (cognition), such as attention, perception, or memory. Depending on the extent of the retardation - mild, moderate, severe, or profound - individuals will develop differently in academic, social, and vocational skills.

Appropriate educational opportunities that begin in infancy and continue throughout the developmental period and beyond will enable children with mental retardation to develop to their fullest potential. Most can enter the competitive labor market and the mainstream of daily life. With appropriate support, others can live productive and independent lives.

Educational Implications

Persons with mental retardation have the capacity to learn, to develop, and to grow. The great majority of these citizens can become productive and full participants in society. As with all education, modifying instruction to meet individual needs is the starting point for successful learning. Throughout their child's education, parents should be an integral part of the planning and teaching team.

In teaching persons with retardation, it is important to:

- -Use concrete materials that are interesting, age-appropriate and relevant to the students;
- -Present information and instructions in small, sequential steps and review each step frequently;
- -Provide prompt and consistent feedback;
- -Teach these children, whenever possible, in the same school they would attend if they were not mentally retarded;
- -Stress success;
- -Teach tasks or skills that students will use frequently in such a way that students can apply the tasks or skills in settings outside school; and
- -Remember that tasks that many people learn without instruction may need to be structured, or broken down into small steps or segments, with each step being carefully taught.

Children and adults with retardation need the same basic services that all people need for normal development. These include education, vocational preparation, health services, recreational opportunities, and many more. In addition, many persons with retardation need specialized services to meet special needs. Such services include diagnostic and evaluation centers; special early education opportunities, beginning with infant stimulation programs and continuing through preschool; and educational programs that include age-appropriate activities, functional academics, transition training, and opportunities for independent living and competitive employment to the maximum extent possible. As citizens with mental retardation gain greater access to integrated educational and community living opportunities, they are demonstrating greater abilities to learn, work, and live independently.

Research Findings

Recent scientific and medical research shows that mental retardation can be caused by different biological factors occurring before, during, or after birth. Probably the greatest number of children with mental retardation have chromosome abnormalities. Other biological factors include (but are not limited to): asphyxia (lack of oxygen); blood incompatibilities between mother and fetus; and maternal infections, such as rubella or herpes. Certain drugs have been linked to problems in fetal development. During the 1980's, medical research has focused on the harmful effects of heavy alcohol, tobacco, and illegal drug use, as well as drugs and medications used during pregnancy.

In addition, there are some biological factors that occur after birth that may lead to mental retardation. These include: brain tumors and infections, head injuries, severe malnutrition, and accidental poisoning from environmental toxins (such as lead or mercury). Modern medical technology has made advances in prevention and early treatment for infants at risk for mental retardation.

Medical science continues to investigate causes and possible treatment for a wide variety of conditions associated with mental retardation. Educational research is involved in developing and implementing model programs for nontraditional learners that will give them greater skills in educational and community settings. Social scientists continue their work to integrate people with mental retardation into the community. Through the application of the current development of new knowledge, researchers continue to seek the causes and prevention of disorders and conditions that can lead to mental retardation.

RESOURCES

Books, Articles and Other Publications

Help for Families

Cougan, T., & Isbell, L. We Have Been There: Families Share the Joys and Struggles of Living with Mental Retardation. 1983. (Abdingdon Press, 201 8th Avenue S., Nashville, TN 37202)

Cunningham, C., & Sloper, P. Helping Your Exceptional Baby: A Practical and Honest Approach to Raising a Mentally Handicapped Child. 1980. (Pantheon Books, 2201 East 50th Street, New York, NY 10022)

Cutler, Barbara C. Unraveling the Special Education Maze: An Action Guide for Parents. 1981. (Research Press, Box 3177, Dept. D., Champaign, IL 61821)

Mather, J. Make the Most of Your Baby. 1981. (Association for Retarded Citizens of the United States, 2501 Avenue J, Arlington, TX 76006)

Perske, R. Hope For the Families: New Directions For Parents of Persons with Retardation and Other Disabilities. 1981. (Abingdon Press, 201 8th Avenue S., Nashville, TN 37202)

Tumbull, H.R., & Turbull, A.P. Parents Speak Out: Then and Now. (2nd edition). 1985. (Charles E. Merrill Publishing Company, Columbus, OH 43216)

Zukeman, L. & Yrua, M.T. Raising the Exceptional Child: Meeting the Everyday Challenge of the Handicapped or Retarded Child. 1979. (Hawthorn Books, 2 Park Avenue, New York, NY 10016)

Education

Macmillan, D.L. Mental Retardation in School and Society. (Little,Brown & Company, 34 Beacon Street, Boston, MA 02106)

Mulick, J.A. & Pueschel, S. Parent-Professional Participation in Developmental Disability Services: Foundations and Prospects. 1983. (The Ware Press, Cambridge, MA)

Reynolds, M.C. & Birch, J.W. Teaching Exceptional Children in All America's Schools. 1982. (The Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091)

NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

EMOTIONAL DISTURBANCE

Definition

Many items are used to denote severe behavior problems (emotional handicaps or disturbances, behavior disorders, physiological disorder, social maladjustment, delinquency, schizophrenia, mental illness, and psychosis). However, most people would agree that each of these terms indicate behavior that is significantly different from what is expected of someone at a particular age.

Public Law 94-142, The Education for All Handicapped Children Act, defines serious emotional disturbances as "a condition exhibiting one or more of the following characteristics over a long period of time and to a marked degree, which adversely affects educational performance.

- An inability to learn which cannot be explained by intellectual, sensory, or health factors;
- An inability to build or maintain satisfactory interpersonal relationships with peers and teachers;
- A general pervasive mood of unhappiness or depression; or
- A tendency to develop physical symptoms or fears associated with personal or school problems" (U.S. Federal Register 42, August 23, 1977, pp. 42478-42479).

The Federal Register definition includes children who are schizophrenic. The law excludes socially maladjusted children (except those determined to be seriously emotionally disturbed) and autistic children (who are included in the "other health impaired" category).

Incidence

For the school year of 1983-84, 362,073 children and youth with emotional disturbances were provided services in the public schools (Seventh Annual Report to Congress, U.S. Department of Education, 1985).

Characteristics

The causes of emotional disturbance have not been adequately determined. Although various factors such as heredity, brain disorder, diet, stress, and family functioning have been suggested as possible causes, research has not shown any of these factors to be the direct cause of behavior problems. Some of the characteristics and behaviors seen in disturbed children include:

- Hyperactivity (short attention span, impulsivity);
- Aggression/self-injurious behavior (acting out fighting);
- Withdrawal (failure to initiate interaction with others, retreat from exchanges of social interaction, excessive fear or anxiety);
- Immaturity (inappropriate crying, temper tantrums, poor coping skills);
- Social maladjustment (truancy, delinquency); and
- Learning problems (deficits in academic achievement).

The profoundly disturbed child is typically identified as psychotic or schizophrenic. His or her behavior tends to show distorted thinking, excessive anxiety, bizarre motor acts, and frequent mood changes.

Many children who are not emotionally disturbed may display these same behaviors at various times during their development. However, when a child is emotionally disturbed, these behaviors continue over long periods of time. The child's behavior thus signals that the child is not coping with the environment or peers and, in fact, may be bringing harm to himself or herself, and/or others.

Education

Educational instruction for children with emotional disturbances may be similar to the programming provided to other handicapped children. Major objectives include developing social skills and increasing self-control. Other goals in addition to teaching basic self-care may include teaching basic self-care skills. Career education (vocational programs) is rapidly becoming a major part of secondary education for those children, and is recommended as part of every adolescent's individualized education program (IEP).

Behavior modification is one of the most widely used approaches to teaching children with emotional behavior disorders. This approach increases appropriate behaviors and decreases inappropriate behaviors by using the principles of reinforcement and shaping. Art, music, play and drama therapies have been helpful to some children. Most professionals consider a well structured program to be vitally important when working with disturbed children, regardless of the particular approach chosen. It is important that teachers and parents react as consistently as possible.

The approaches described above, together with extra support for teachers, have allowed more children with emotional disturbances to be educated in the public schools in the past. Programs are moving towards intensive, short term intervention rather than specialized placements. The focus of intervention is early detection and prevention.

Other Considerations

Families of children with emotional disturbance may need help in understanding their child's condition and in learning how to work effectively with him or her. Help is available from psychiatrists or psychologists in public or private mental health settings. Sometimes it is necessary to remove the child from the home and to obtain residential care. Each child should be provided services based on his or her individual needs and all persons who are involved with the child should be aware of the care he or she is receiving, that is, it is important to coordinate all services with communication between home, school, and the therapeutic community.

REFERENCES

Help for Families

Bernheim, K., Lewine, R., & Beale, C. (1982). The Caring Family. (Random House, Inc., 400 Hahn Rd., Westminister, MD 21157)

Brehm, S. (1978). Help for Your Child: A Parent's Guide to Mental Health Services. (Prentice-Hall International, Inc., 301 Sylvan Avenue, Englewood Cliffs, NJ 07632)

Oliver, B. (1976). The ABC's of Hanging On While Raising a Family with a Disturbed Child. (Flo-Bet Press, P.O. Box 511, Westwego, LA 70094)

Park, C.C. & Sahpiro, L. (1979). You are Not Alone: Understanding and Dealing with Mental Illness. (Little, Brown and Company, 34 Beacon Street, Boston, MA 02106)

Education

Algozzine, R., Schmid, R., & Mercer, C.D. (1981). Childhood Behavior Disorders, Applied Research and Educational Practice. (Aspen Systems Corporation, 1600 Boulevard. Rockville, MD 20850)

Blankenship, C., & Lilly, S.A. (1981). Mainstreaming Students with Learning Behavior Problems. (Holt, Rinehart and Winston, 383 Madison Avenue, New York, NY 10017)

Morse, W.C., Ardizzon, J., MacDonald, C., & Pasick, P. (1980). Affective Education for Special Children and Youth. (Council for Exceptional Children, 1920 Association Drive, Reston, VA 22091)

Stainback, S. & Stainback, W. (1980). Educating Children With Severe Maladaptive Behaviors. (Grune and Stratton, 111 Fifth Avenue, New York, NY 10003)

Other

Fagan, S.A., Long, N.J., & Stevens, D.J. (1975). Teaching Children Self Control. (Charles E. Merrill Co., 1300 Alum Creek Drive, Columbus, OH 43216)

Kaufman, J.M. (1981). Characteristics of Children's Behavior Disorders. (Charles E. Merrill Co., 1300 Alum Creek Drive, Columbus, OH 43216)

Reinert, H.C. (1980). Children in Conflict. (C.V. Mosby Co., 11830 Westline Industrial Drive, St. Louis, MO 63141)

Twilford, R. (1979). A Child with a Problem: A Guide to Psychological Disorders of Children. (Prentice-Hall International, Inc., 301 Sylvan Avenue, Englewood Cliffs, NJ 07632)

RESOURCES

American Association of Psychiatric Services for Children
1133 Fifteenth Street, NW, Suite 1000
Washington, DC 20005
(Provides information on meetings and professional journals)

Council for Children with Behavioral Disorders
c/o Council for Exceptional Children
1920 Association Drive
Reston, VA 22091
(Distributes fact sheet on emotional disturbance)

Families as Allies Project
Research & Training Center to Improve Services to Emotionally Handicapped Children and Their Families
Portland State University
P.O. Box 751
Portland, OR 97207
(Designed to "promote collaboration between families of children with emotional handicaps and the professionals who serve them". Publishes "National Directory of Organizations Serving Parents of Seriously Emotionally Handicapped Children and Youth".)

National Alliance for the Mentally Ill
1901 N. Fort Myer Drive #500
Arlington, VA 22209
(Distributes literature on emotional and behavioral problems. State affiliates provide support services).

National Mental Health Association
1021 Prince Street
Alexander, VA 22314-2971
(Offers referral services to parents. Some affiliates provide parent support services).

NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

SEVERE AND/OR MULTIPLE HANDICAPS

Definition

The term severe handicap indicates an intense degree of a condition such as mental retardation, deafness, blindness, physical disability or emotional disturbance. It may also refer to more than one, or a "multiple" handicap, such as mental retardation and cerebral palsy or blindness and physical disability.

An individual with severe handicaps need not be multihandicapped. Severity describes the degree of involvement in a specific disability.

Incidence

In the 1985-86 school year, the states reported to the U.S. Department of Education that they were providing services to 89,231 children with multiple handicaps. This number represents .22% of the school enrollment. Severe handicaps are not one of the categories reported.

Characteristics

Children and youth with severe or multiple handicaps may exhibit a wide range of characteristics, depending upon the combination of handicaps, the child's age, and the severity of the disabilities. There are, however, some traits that these children may share, including:

- Limited speech or communication;
- Difficulty in basic physical mobility;
- Inability to care for themselves;
- Failure to relate to or attend to others; and
- Tendency toward self-injury or abuse.

Medical Implications

Many different medical problems may accompany severe handicaps. A few examples include seizures, hydrocephalus, and scoliosis. These conditions should be taken into consideration when establishing services for the child. A multidisciplinary team consisting of the child's parents, educational specialists and medical specialists in the areas in which the child demonstrates problems should work together to plan and coordinate the child's services.

Educational Implications

In the past, children with severe and/or multiple handicaps were regularly excluded from the public schools. Since the implementation of Public Law 94-142, the Education for All Handicapped Children Act, public schools are now serving large numbers of severely and/or multiply handicapped students. Some of these children and youth have returned from institutions, others may be entering structured programs for the first time, and still others are graduates of high quality intervention programs.

Educational programs for children with severe and/or multiple handicaps need to incorporate a variety of components to meet the tremendous needs of these children. Thus, instruction should cover the following areas:

- Academics;
- Communication;
- Sensory stimulation; and
- Self-sufficiency.

Related services are of great importance, and the multidisciplinary approach is critical. Appropriate persons such as speech and language therapists, physical and occupational therapists, and medical specialists need to work closely with the classroom teacher and parents.

Frequently, classroom arrangements must take into consideration students' needs for medication, special diet, or special equipment. Special aids and adaptive equipment enable these children to increase their range of functioning. In recent years, for example, computers have become effective communication devices. Other aids which may be seen in classrooms include: wheelchairs, typewriters, headsticks (headgear), clamps, modified handles on cups and silverware, and communication boards.

Integrated with nonhandicapped students is another concern. For many of these students, placement in a special class of a local school allows for interaction during the normal school day.

Vocational and leisure skills are a critical consideration for children and youth with severe handicaps. Programming for maximum independence should begin as early as elementary school. In order to prepare the student for post-school adjustment and the greatest degree of independence and self-sufficiency, the program should draw on community services including group homes, vocational programs, and recreational programs.

RESOURCES

Blacher, J. Severely Handicapped Young Children and Their Families: Research in Review. 1984. (Academic Press, Inc., Orlando, FL 32887)

Orelove, F. & Sobsey, D. Educating Children with Multiple Disabilities: A Transdisciplinary Approach. 1987. (Paul H. Brookes Pub. Co., P.O. Box 10624, Baltimore, MD 21285-0624)

Valletutti, P. J. & Simms-Tucker, B.M. (Eds.) Severely and Profoundly Handicapped Students: Their Nature and Needs. 1984. (Paul H. Brookes Pub. Co., (see above).

ORGANIZATIONS

The Association for Persons with Severe Handicaps (TASH)
7010 Roosevelt Way, N.E,
Seattle, WA 98115
206-523-8446

Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091
703-620-3660

March of Dimes Birth Defects Foundation
1275 Mamaroneck Ave.
White Plains, NY 10605
914-428-7100

National Easter Seal Society
2023 West Ogden Ave.
Chicago, IL 60612
800-211-6827 (Toll Free)

National Industries for the Severely Handicapped (NISH)
2235 Cedar Lane
Vienna, VA 22180
703-560-6800
703-560-6512 (TDD)

National Rehabilitation Information Center (NARIC)
8455 Colesville Rd., Suite 935
Silver Spring, MD 20910-3319
800-588-9284 (Toll Free)
800-346-2742 (Voice/TDD) (Toll Free)

SKIP - Sick Kids (Need) Involved People
c/o SKIP of New York
500 E. 83rd Street, Suite 1B
New York, NY 10028
212-628-5994

Trace Research & Development Center on Communication, Control and Computer Access for Handicapped Individuals
1500 Highland Ave., S-151 Center
University of Wisconsin-Madison
Madison, WI 53705
608-262-6966

NICHCY
National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

GENERAL INFORMATION ABOUT LEARNING DISABILITIES

Definition

The regulations for Public Law 94-142 (The Education of the Handicapped Act) define a learning disability as a "disorder in one or more of the basic psychological processes involved in understanding or in using spoken or written language, which may manifest itself in an imperfect ability to listen, think, speak, read, write, spell or do mathematical calculation."

The Federal definition further states that learning disabilities include "such conditions as perceptual handicaps, brain injury, minimal brain dysfunction, dyslexia, and developmental aphasia." According to the law, learning disabilities do not include learning problems that are primarily the result of visual, hearing, or motor handicaps; mental retardation; or environmental, cultural, or economic disadvantage. Definitions of learning disabilities also vary among states.

Having a single term to describe this category of children with handicaps reduces some of the confusion, but there are many conflicting theories about what causes learning disabilities and how many there are. The label "learning disabilities" is all-embracing; it describes a syndrome, not a specific child with specific problem. The definition assists in classifying children, not teaching them. Parents and teachers need to concentrate on the individual child. They need to observe both how and how well the child performs, to assess strengths and weaknesses, and invent ways to help each child learn. It is important to remember that there is a high degree of interrelationship and overlapping among the areas of learning. Therefore, children with learning disabilities may exhibit a combination of characteristics. These problems may mildly, moderately, or severely impair the learning process.

Incidence

Many different estimates of the number of children with learning disabilities have appeared in the literature (ranging from 1% to 30% of the general population). In 1987, the Interagency Committee on Learning Disabilities concluded that 5% to 10% is a reasonable estimate of the percentage of persons affected by learning disabilities. The U.S. Department of Education (1987) reported that 4.73% of all school aged children received special education services for learning disabilities and that in the 1986-87 school year over 1.9 million children with learning disabilities were served under Public Law 94-142. Differences in estimates perhaps reflect variations in the definition.

Characteristics

Students who have learning disabilities may exhibit a wide range of traits, including problems with reading comprehension, spoken language, writing, or reasoning ability. Hyperactivity, in-attention, and perceptual coordination problem may also be associated with learning disabilities. Other traits that may be present include a variety of symptoms of brain dysfunction, such as an uneven and unpredictable test performance, perceptual impairments, motor disorders, and such emotional characteristics as impulsiveness, low tolerance to frustration and problems in handling day-to-day social interactions and situations.

One of the most apparent characteristics of learning disabilities is a significant difference in the child's achievement in some areas, as compared to his or her overall intelligence.

Learning disabilities may occur in the following academic areas:

- Spoken language: Delays, disorders, or discrepancies in listening and speaking;
- Written language: Difficulties with reading, writing, and spelling;
- Arithmetic: Difficulty in performing arithmetic functions or in comprehending basic concepts; and
- Reasoning: Difficulty in organizing and integrating thoughts.

Education Implications

Because learning disabilities are manifested in a variety of behavior patterns, the Individual Education Program (IEP) must be designed carefully. A team approach is important for educating the child with a learning disability, beginning with the assessment process and continuing through the development of the IEP. Close collaboration among special class teachers, parents, resource room teachers, regular class teachers, and others, will facilitate the overall development of a child with learning disabilities.

Some teachers report that the following strategies have been effective with some students who have learning disabilities:

- High structure and clear expectations;
- Using short sentences and simple vocabulary
- Opportunities for success in a supportive atmosphere;
- Flexibility in classroom procedures (e.g., allowing the use of tape recorders for note-taking and test taking when students have trouble with written language);
- Self-correcting materials, which provide immediate feedback without embarrassment;
- Using computers for drill and practice and teaching work processing; and
- Positive reinforcement of appropriate social skills at school and home.

RESOURCES

Interagency Committee on Learning Disabilities. Learning-Disabilities: A Report to Congress. 1987. (National Institute of Child Health and Human Development, 9000 Rockville Pike, Bethesda, MD 20892)

Journal of Learning Disabilities." (PRO-ED, Austin, TX)

Lerner, J. Learning Disabilities: Theories, Diagnosis, and Teaching Strategies. 1985. (Houghton, Mifflin Co., Boston, MA)

Smith, S. No Easy Answers -- Learning Disabled Child. 1981. (Bantam Books, New York, NY)

ORGANIZATIONS

Association for Children and Adults with Learning Disabilities (ACLD)
4156 Library Road
Pittsburgh, PA 15234
412-341-1515
or
412-341-8077

Co-ADD (Coalition for the Education and Support of Attention Deficit Disorder)
P.O. Box 242
Osseo, MI 55369
612-425-0423

Division of Learning Disabilities
Council for Exceptional Children
1920 Association Drive
Reston, VA 22091
703-620-3660

Foundation for Children with Learning Disabilities (FCLD)
99 Park Avenue
New York, NY 10016
212-687-7211

National Network of Learning Disabled Adults (NNLDA)
808 North 82nd Street, #F2
Scottsdale, AZ 85257
602-941-5112

Orton Dyslexia Society
724 York Road
Baltimore, MD 21204
301-296-0232
800-222-3123 (Toll Free)

Annotated Bibliography

There are many excellent resources available in the marketplace, but it is sometimes difficult for the rural school-based occupational therapist to locate these resources. We hope you find them useful. The annotated bibliography includes sources we have found useful and recommend to practicing occupational therapists.

Bissell, J., Fisher, J., Owens, C., & Polcyn, P. (1988). Sensory motor handbook: A guide for implementing and modifying activities in the classroom. Torrance, CA: Sensory Integration International. 178 pages.

This guide provides occupational therapists with a resource to assist classroom teachers in analyzing activities. Based on neurological principles underlying learning, the handbook presents information in lay terminology regarding sensory processes and motor components that promote classroom success or may cause problems. The authors use a problem-oriented approach to analyze possible classroom difficulties, looking at the difficulties in terms of which possible sensory and/or motor components may be affecting performance. Suggested activities are given to remediate and/or compensate for these components. A large section of the text provides activities and games that can be used by the teacher to assist in facilitating sensory motor development. Instructions for some materials are included. The bibliography lists references for both theoretical and practical information.

Cicirello, N., Hall, S., Hylton, J., & Reed, P. (1988). Teaching nontherapists to do positioning and handling in educational settings. Portland, OR: Oregon Health Sciences University. 80 pages. Project Ties.

Developed to help physical and occupational therapists teach non-therapists to carry out recommendations for positioning and handling, this manual discusses movement and motor impairment, handling body mechanics, and positioning. Portions of the manual can be photocopied and given to nontherapists to reinforce the therapist's instructions and demonstrations. The manual contains illustrated positions and information about their advantages, disadvantages, tips for their use, and space for therapist-generated, student-specific information; as well as strategies for teaching about muscle tone, the use of proper body mechanics and the application of the principles of positioning and handling. The manual is designed to be used in conjunction with the videotape, **Teaching Nontherapists to Protect Their Backs When Moving Students Who Have Physical Disabilities.**

Cicirello, N., Hall, S., Reed, P., & Hylton, J. (1989). The therapists role in adapted physical education. Portland, OR: Oregon Health Sciences University. 36 pages. Project Ties.

This manual on adapted physical education, its goals and its practices, offers information that will enable therapists to consult knowledgeably with the teachers who conduct adapted PE programs. Stating clearly that "physical therapy is not physical education", the manual delineates the essential difference between the two in terms of their differing goals for students, and separate training and certification of practitioners. The manual offers a variety of suggestions for working with teachers to alter equipment, rules, time limits, positions, size of teams and playing areas so students with disabilities will have PE experiences that are meaningful and beneficial.

Dunn, W., Campbell, P.H., Oetter, P.L., Hall, S., Berger, E., & Strickland, L.R. (1989). Guidelines for occupational therapy services in early intervention and preschool services. Rockville, MD: The American Occupational Therapy Association, Inc.

The purpose of these guidelines is to provide philosophies and procedures for the provision of occupational therapy services to infants, toddlers, and preschool children as mandated by the passage of P.L. 99-457. The amendments to the Education of the Handicapped Act of 1986 outlining service provision to this group of children are provided for the reader. The position paper established by the American Occupational Therapy Association is included. Public policy and occupational therapy's role in the development of that policy is discussed. The book provides discussions of "best practice" versus standard practice, the role of values of each team member in decision making, referral and discharge planning, communication, service provision, and team models. Because services for the infant/toddler group are provided as a family service, information is given for the occupational therapist's role in working with families and providing services using interagency collaboration. Best practice is discussed in terms of both the infant/toddler population and preschool population. Discussion of transitions from the early intervention programs to preschool programs are provided. An extensive bibliography is provided for the reader. The appendixes include: evaluation performance components, monitoring parameters, determination of caseload, AOTA publications, and a guide to classifying occupational therapy personnel. The process and format for developing Individualized Family Service Plans concludes the guidelines.

Hall, S., Cicirello, Reed, P., & Hylton, J. (1988). Considerations for feeding children who have a neuromuscular disorder. Portland, OR: Oregon Health Sciences University. 19 pages. Project Ties.

Speech-language pathologists, occupational therapists and physical therapists who have responsibility for training others to conduct feeding activities will find this manual a valuable addition to their training and demonstrations. Written in nontechnical language, the manual discusses feeding procedures as they relate to general nutrition, socialization and communication. It deals with selecting food textures and consistencies, positioning the child for feeding, selecting equipment for feeding, and precautions that must be exercised during feeding. This manual is a companion to **Selected Articles on Feeding Children who have a Neuromuscular Disorder**.

Hall, S., Meek, M., Cicirello, N., Reed, P., & Hylton, J. (Eds.). (1988). Selected articles on feeding children who have a neuromuscular disorder. Portland, OR: Oregon Health Sciences University. 43 pages. Project Ties.

Intended for speech-language pathologists, physical therapists, and occupational therapists who assess and treat feeding disorders, this selection of technical articles covers normal and abnormal oral-motor development, anatomy and physiology of the oral-pharyngeal mechanism, normal feeding patterns, the influence of cerebral palsy on oral-motor functioning, procedures for promoting jaw control, and guidelines for feeding children who have an oral-motor dysfunction. Together, the articles present the background needed for a sophisticated and practical approach to diagnosing and managing abnormal feeding patterns. This manual is a companion to the one entitled **Considerations for Feeding Children Who Have a Neuromuscular Disorder.**

Hanft, B.E. (Ed.). (1989). Family-centered care: An early intervention resource manual. Rockville, MD: The American Occupational Therapy Association, Inc.

This manual is written in response to the passage of Public Law 99-457, establishing federal and state programs of early intervention services for infants and toddlers. The American Occupational Therapy Association developed workshops focusing on family-centered care and provided this manual for use by those involved in the early intervention process. The text is divided into five units, with articles written by occupational therapists, educators, parents, and other health care professionals who have been involved in early intervention programs. Unit I: Family Systems discusses the family of today and examines culture, values, and resources and the role these factors play in the function of any family. Unit II: Parent/Professional Partnerships focuses on the relationships parents and professionals may be sharing during the provision of early intervention services and importance of empowering parents with the skills that will facilitate both the parents skills as their children's advocates and the skills of the children with handicaps or at-risk conditions. Unit III: Family-Centered Services discusses the shift from child-centered care to that of family-centered care. Included is information regarding the Individualized Family Service Plan and a review of selected family needs and resources assessment tools. Unit IV: Family-centered Teams focuses on the relationships parents and professionals have had as team members and suggests approaches which may enhance the productivity of such teams. Issues in consultation and specialization for occupational therapists are addressed in this unit. Unit V: Interagency Collaboration discusses issues in the law providing for the coordination of services between the various state agencies. Funding, program evaluation, and the actual law are included. A list of state agencies and committee chairpersons, parent advocacy groups, and national organizations is provided. Each unit also includes an annotated bibliography on the various topics.

Hylton, J., Reed, P., Hall, S., & Cicirello, N. (1989). The roles of physical and occupational therapists in the school setting. Portland, OR: Oregon Health Sciences Univeristy. 69 pages. Project Ties.

This manual was prepared particularly for therapists who are new to the school setting but it will be useful to anyone interested in the quality of therapy services offered in school programs. Therapists, as well as therapy assistants, teachers, administrators, and parents can gain a better understanding of the mission of therapy in the schools and the laws, policies and principles that guide the execution of that mission. The manual discusses therapy's primary role of providing services provided by therapists in schools, guidelines for matching services with student needs, an overview of a functional approach to intervention, and a formula for determing the size of caseloads.

Klein, M.D. (1983). Pre-dressing skills. Tucson, AZ: Communication Skill Builders. 152 pages.

This guide provides occupational therapists, as well as teachers and parents, with a resource for both dressing and undressing skills. Dressing is discussed in relation to general principles of growth and developmental maturation (cephlo-caudal, proximal-distal, medial-lateral, and general-specific). The skills are then discussed as they relate to specific infant to six-year-old development. A developmental checklist of pre-dressing skills is provided. Prerequisite motor and sensory skills for dressing are addressed. Intervention strategies are discussed in terms of using standard, adaptive, and assistive techniques and devices. Each type of clothing and fastener that is typically worn is addressed, providing a checklist, standard and adaptive techniques, and modifications that may be necessary. The author discusses teaching dressing skills to children with physical handicaps and provides resources for obtaining adapted clothing. Classroom activities for pre-dressing skills, including games, are provided. Sample formats of weekly activity plans and preparation for individual pre-dressing programs are given.

Klein, M.D. (1987). Pre-scissor skills (rev. ed.). Tucson, AZ: Therapy Skill Builders. 67 pages.

This book provides occupational therapists, as well as teachers and parents, with a concise guide to the development of pre-scissor skills. First, prerequisite skills for scissor usage are discussed. A sequence for scissor usage is given as well as a checklist for skill development. The author provides the reader with a graded list of eight cutting materials. Types of scissors commercially available are described along with suggested appropriate usage. Material and method adaptations are suggested for clients with a variety of needs. Activities are provided for developing pre-scissor skills. Adaptations to classroom activities provide the reader with a variety of suggestions. The final section is devoted to the preparation of individual education plans for scissor usage.

Klein, M.D. (1988). Pre-sign language motor skills. Tucson, AZ: Communication Skill Builders. 103 pages.

This guide provides occupational therapists, teachers, parents, and other service providers with a resource for understanding the motor components necessary in teaching sign language. The motor requirements used in sign language are discussed in relation to the principles of normal growth and development (cepho-caudal, proximal-distal, and general-specific). The use of sign language is discussed in terms of sign relationship to the body, hand usage patterns, and hand shapes giving a developmental progression in each area. The author stresses the importance of sign analysis when beginning or progressing with sign language instruction and provides an outline for such analysis. A pre-sign assessment is detailed for both informal and formal evaluation. Teaching techniques are suggested along with trainer rules and some adaptations that might be effective. Several pre-sign activities are provided. A format for an individualized sign language program is provided.

Morris, S.E., & Klein, M.D. (1987). Pre-feeding skills: A comprehensive resource for feeding development. Tucson, AZ: Therapy Skill Builders. 399 pages.

This book provides theoretical, factual, and practical information about feeding. The reader is introduced to the topic through discussions of anatomical structures and physiological processes that occur within the oral-pharyngeal structures. As a basis for treatment of problems, a lengthy discussion is provided detailing normal development of pre-feeding skills. Normal developmental issues of movement and sensation are presented. Feeding skills are analyzed from both sequential (processes within feeding) and global (developmental stages) references. Feeding problems which can occur within the oral structures, the sensory process, or the feeding process are explored. Feeding assessment is presented as an ongoing process, with steps for this process described and rationale for each step is given. Guidelines for establishing a treatment program, including roles for each member, are given. Options for communication and learning for the child, feeder, and therapist are related. Environmental, positioning and handling factors are considered with equipment suggestions offered. A discussion of nutrition explores the normal caloric/fluid needs of infants and young children as well as problems that may occur (such as allergies, reactions to medications, etc.). Specific treatment recommendations are discussed in terms of problems related to oral structures, sensory processes, and feeding processes. A sequence of normal self-feeding is presented with suggested techniques for facilitation of skills and recommended equipment. A discussion of the relationship between feeding and speech is presented. Pre-feeding issues specifically identified with children who are premature, tube-fed, with cleft palate, who are blind, and with minimal involvement are discussed, with treatment suggestions and equipment recommendations. Materials for assessment and treatment are presented along with criteria for use and addresses of distributors and manufacturers. The volume provides information using text and illustrations and includes suggested participation experiences and probes throughout. Forms, which may be reproduced or used as a basis for individualized records, are provided for the various stages of the assessment process and in developing a pre-feeding plan.

Play: A skill for life. (1986). Rockville, MD: The American Occupational Therapy Association, Inc. 66 pages.

This monograph is a compilation of five articles related to play of children with handicapping conditions and with its use in occupational therapy. The first article discusses the significance of play in normal children and suggests rationale and methods for fostering play with children who have handicapping conditions. Next, a study evaluating toys and their use with children with severe mental handicaps provides the reader with a method of evaluating what materials to use and recommendations to facilitate independent and/or functional play. Play and therapy as individual activities are discussed in the third article as well as the appropriate use of play activities to achieve therapy goals. Use of costumes and dress-up play as a therapeutic aid in teaching dressing and undressing skills to children with handicaps is provided in the fourth article. The program follows a developmental continuum for achieving these skills and suggests additional materials for the program's success. The final article discusses infant play in relationship to Piaget's stages of cognitive development and the acquistion of motor skills. Knowledge of these stages of development can assist the occupational therapist in planning intervention that is relevant to the child with a handicap.

Reed, P., Hylton, J., Cicirello, N., & Hall, S. (1988). A model plan for the supervision and evaluation of therapy services in educational settings. Portland, OR: Oregon Health Sciences University. 81 pages. Project Ties.

Supervisiors in schools who have responsibility for evaluationg and supervising the work of physical and occupational therapists often find themselves untrained to evaluate the parrts of the therapists' jobs that actually encompass therapy. On the other hand, therapists who are relatively new to the school setting may need substantive comment on their performance in an environment that is entirely different from the one in which they received their training. This manual, written to serve as a model for school districts when developing procedures for supervising and evaluating therapy services, will be useful to supervisors and therapists alike.

Reed, P., Hylton, J., Cicirello, N., & Hall, S. (1988). Adapting equipment, instruction and environments in educational settings. Portland, OR: Oregon Health Sciences University. 49 pages. Project Ties.

Useful for professionals, parents and paraprofessionals who have responsibility for students with physical disabilities, this richly illustrated manual offers practical information on developing adaptations for self-help and independence, mobility, positioning, toys and play, computer access, instruction, and architectural access. It discusses, in a well organized approach, the principles underlying the selection, fabrication and application of adaptation, and it contains sources of equipment and materials.

Reed, P., Hylton, J., Cicirello, N., & Hall, S. (1988). Consultation and team skills for therapists in educational settings. Portland, OR: Oregon Health Sciences University. 50 pages. Project Ties.

This manual offers information about the skills that occupational and physical therapists need in order to function effectively in school settings as consultants, team members, and participants in various groups. The manual adapts this information particularly for therapists in discussion on consultation as a process, collaborative decision making, tips for making meetings more effective, and guidelines for training other adults.

Young, S.B., & Keplinger, L. (1988). Movement is fun: A preschool movement program. Torrance, CA: Sensory Integration International. 104 pages.

This book describes a movement program based on general principles of movement education and applies the theories of sensory integration development. The program was developed to be used with preschoolers three to five years old. The authors state three applications for the program: early identification of children with possible developmental lags, enhancement of normal developmental skills, and development of group activities based on sensory integration goals. The activities can be used for therapeutic purposes with groups of children when a therapist has identified, through evaluation, specific developmental needs of children. The text includes suggestions for space, scheduling, teachers, and equipment needed. Details for group management are outlined. Twenty-six lesson plans are provided for the reader. These are divided into the following areas: introduction, tactile system, vestibular system, proprioceptive system, postural responses, bilaterality, and motor skills. The plans provide a basis for activities to be used in hopes that the user of the program will expand the program as he/she becomes more familiar with it.

Additional Resources

As we compiled information for our students, we identified many state and national resources which useful information on specific topics. The next section contains addresses and phone numbers of a number of national organizations who serve individuals with handicapping conditions. A list of health-related toll free phone numbers is included. Finally, a list of Kansas reources is provided to demonstrate the resources available within a state (resource sheets for individual states. are available from NICHCY upon request).

The National Information Center for Children and Youth with Handicaps (NICHCY), is funded by the United States Department of Education, Office of Special Education and Rehabilitative Services (OSERS). NICHCY functions as a national clearinghouse that provides information and referral sources to both parents of children with disabilities and the professionals who serve in the disabilities field.

ALL PUBLICATIONS ARE PROVIDED FREE OF CHARGE.

For more information and a publications list,write:

NICHCY
P.O. Box 1492
Washington, D.C. 20013
(703) 522-3332

NICHCY

National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

NATIONAL RESOURCES

CLEARINGHOUSES

Center for Special Education Technology
Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091-1589
703-620-3660
800-345-TECH (Toll Free)

ERIC Clearinghouse on Handicapped and Gifted Children
Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091-1589
703-620-3660

Higher Education and Adult Training for people with Handicaps (HEATH)
One Dupont Circle, N.W., Suite 800
Washington, D.C. 20036-1193
202-939-9320
800-544-3284 (Voice/TDD)

National Clearinghouse for Professions in Special Education
2021 K Street, N.W., Suite 315
Washington, D.C. 20006
202-296-1800

National Health Information Center
P.O. Box 1133
Washington, D.C. 20013-1133
301-565-4167 (in Maryland)
800-336-4797 (Toll Free)

National Information Center on Deafness (NICD)
Gallaudet University
800 Florida Avenue, N.E.
Washington, D.C. 20002
202-651-5051 (Voice)
202-651-5052 (TDD)

National Information Center on Deaf-Blindness
Gallaudet University. College Hall 217
800 Florida Avenue, N.E.
Washington, D.C. 20002
202-651-5289

National Rehabilitation Information Center (NARIC)
8455 Colesville Road, Suite 935
Silver Spring, MD 20910-3319
301-588-9284
800-346-2742 (Voice/TDD)

ORGANIZATIONS

American Council of Rural Special Education (ACRES)
Western Washington University
Miller Hall 359
Bellingham, WA 98225
206-676-3576

American Foundation for the Blind (AFB)
15 West 16th Street
New York, NY 10011
212-620-2000
800-AFBLIND (Toll Free)

American Physical Therapy Association (APTA)
1111 North Fairfax Street
Alexandria, VA 22314
703-684-2782

American Occupational Therapy Association (AOTA)
P.O. Box 1725
1383 Piccard Drive
Rockville, MD 20850
301-948-9626

American Speech-Language-Hearing Association
(ASHA)
10801 Rockville Pike
Rockville, MD 20852
301-897-5700 (Voice/TDD)

Association for the Care of Children's Health (ACCH)
3615 Wisconsin Ave., N.W.
Washington, D.C. 20016
404-244-1801

Association for Children and Adults
with Learning Disabilities (ACLD)
4156 Library Road
Pittsburgh, PA 15234
412-341-1515 or 412-341-8077

Association for Persons with Severe Handicaps (TASH)
7010 Roosevelt Way, N.E.
Seattle, WA 98115
206-523-8446

Association for Retarded Citizens of
the United States (ARC)
2501 Avenue J
Arlington, TX 76005
817-640-0204

Autism Society of America
(formerly NSAC)
1234 Massachusetts Ave., N.W.
Washington, D.C. 20005
202-783-0125

Council for Exceptional Children (CEC)
1920 Association Drive
Reston, VA 22091
703-620-3660

Epilepsy Foundation of America (EFA)
4352 Garden City Drive, Suite 406
Landover, MD 20785
301-459-3700

Head Start (Project)
Administration for Children, Youth and Families
Offices of Human Development Services
U.S. Dept. of Health and Human Services
P.O. Box 1182
Washington, D.C. 20013
202-755-7710

Independent Living Research Utilization Project (ILRU)
The Institute for Rehabilitation and Research
3400 Bissonnet, Suite 101
Houston, TX 77005
713-666-6244

March of Dimes Birth Defects Foundation
1275 Mamaroneck Avenue
White Plains, NY 10605
914-428-7100

Muscular Dystrophy Association (MDA)
810 Seventh Avenue
New York, NY 10019
212-586-0808

National Alliance for the Mentally Ill
(NAMI)
1901 N. Fort Myer Drive, #500
Arlington, VA 22209
703-524-7600

National Down Syndrome Congress
1800 Dempster Street
Park Ridge, IL 60068-1146
312-823-7550 (IL only)
800-232-NDSC (Toll Free)

National Down Syndrome Society
141 Fifth Avenue
New York, NY 10010
212-460-9330 (NY only)
800-221-4602 (Toll Free)

National Easter Seal Society
2023 West Ogden Avenue
Chicago, IL 60612
312-243-8400
312-243-8880 (TDD)
800-221-6827 (Calls Outside IL)

National Head Injury Foundation, Inc.
333 Turnpike Road
Southborough, MA 01772
617-485-9950

National Library Service for the
Blind & Physically Handicapped
The Library of Congress
Washington, D.C. 20542
202-287-5100

National Spinal Cord Injury Association
600 West Cummings Park, Suite 2000
Woburn, MA 01801
617-935-2722
800-962-9629

Orton Dyslexia Society
724 York Road
Baltimore, MD 21204
301-296-0232
800-222-3123 (Toll Free)

Sibling Information Network
University Affiliated Program
991 Main Street, Suite 3A
East Hartford, CT 06108
203-282-7050

Sick Kids (need) Involved People (SKIP)
c/o SKIP of New York
500 E. 83rd St., Suite 1B
New York, NY 10028
212-628-5994

Special Olympics
1350 New York Avenue, N.W., Suite 500
Washington, D.C. 20005-4709
202-628-3630

Spina Bifida Association of America
1700 Rockville Pike, Suite 540
Rockville, MD 20852
301-770-7222
800-621-3141 (Toll Free)

Trace Research and Development Center on
Communication, Control, and Computer
Access for Handicapped Individuals
S-151 Waisman Center
1500 Highland Avenue
University of Wisconsin-Madison
Madison, WI 53705
608-262-6966

United Cerebal Palsy Association, Inc.
66 East 34th Street
New York, NY 10016
212-481-6300
800-872-1827 (Toll Free)

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NICHCY

National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

NATIONAL TOLL FREE NUMBERS

ADOPTION	
National Adoption Center	1-800-TO-ADOPT
AIDS	
National Gay Task Force AIDS Information Hotline	1-800-221-7044
National Sexually Transmitted Diseases Hotline	1-800-227-8922
Public Health Service AIDS Hotline	1-800-342-AIDS
ALCOHOLISM	
Alcoholism Hotline at AD Care Hospital	1-800-ALCOHOL
(if calling from New Jersey)	1-800-322-5525
National Clearinghouse for Alcohol and Drug Information	1-800-622-HELP
BLINDNESS/VISION	
American Council for the Blind	1-800-424-8666
American Foundation for the Blind	1-800-AFBLIND
Job Opportunities for the Blind (JOB)	1-800-638-7518
National Association for Parents of the Visually Impaired	1-800-561-6265
National Eye Care Project Hotline	1-800-222-EYES
National Library Services for the Blind and Physically Handicapped	1-800-424-8567
National Retinitis Pigmentosa Foundation	1-800-638-2300
BURN VICTIMS	
International Shriners Headquarters	1-800-237-5055
(if calling from Florida)	1-800-282-9161
(if calling from Canada)	1-800-361-7256
CANCER	
AMC Cancer Information Line	1-800-525-3777
National Cancer Institute Information Service	1-800-4-CANCER
CAREER COUNSELING	
ERIC Clearinghouse on Adult Career and Vocational Education	1-800-848-4815
Higher Education and Adult Training of people with Handicaps (HEATH Resource Cntr)	1-800-54-HEATH

Job Accomodation Network (JAN)		1-800-526-7234
(if calling from West Virginia)		1-800-526-4698
Job Opportunities for the Blind (JOB)		1-800-638-7518
National Committee for Citizens in Education		1-800-NET

CEREBRAL PALSY

United Cerebral Palsy Associations, Inc. (UCPA)		
National Headquarters (New York, NY)		1-800-USA-1UCP
UCPA Affiliate Relations Division (Washington,DC)		1-800-USA-2UCP
UCPA Community Services Division (Washington,DC)		1-800-USA-5UCP

CHILD ABUSE

National Child Abuse Hotline		1-800-422-4453
Parents Anonymous Hotline		1-800-421-0353
(if calling from California)		1-800-352-0386

CLEFT PLATE

American Cleft Palate Educational Foundation Cleftline		1-800-24-CLEFT
(if calling from Pennsylvania)		1-800-23-CLEFT

COMPUTERS

Apple Office of Special Education		1-800-732-3131 Ext. 275
AT&T Computers (General Sale)		1-800-247-1212
Center for Special Education Technology c/o Council for Exceptional Children		1-800-345-TECH
IBM National Support Center for Persons with Disabilities		1-800-IBM-2133

COMMUNICATIONS DISORDERS

American Spech-Language-Hearing Association	(V/TDD)	1-800-638-8255
National Center for Stuttering		1-800-221-2483

DEAF-BLINDNESS

National Information Center on Deaf-Blindness	(V/TDD)	1-800-672-6720 Extension 5289
(if calling from Washington DC)	(V/TDD)	651-5289

DEAFNESS/HEARING IMPAIRMENTS

Better Hearing Institute Hearing Helpline (Voice)		1-800-424-8576
Captioned Films for the Deaf	(V/TDD)	1-800-237-6213
John Tracy Clinic on Deafness	(V/TDD)	1-800-522-4582
National Hearing Aid Society Hearing Aid HelpLine	(Voice)	1-800-521-5247
Occupational Hearing Services (Dial A Hearing Screening Test)	(Voice)	1-800-222-EARS
(If calling from Pennsylvania)	(Voice)	1-800-345-3277
TRIPOD GRAPEVINE, Service for hearing impaired	(V/TDD)	1-800-352-8888
(if calling from California)	(V/TDD)	1-800-346-8888

DIABETES	
Juvenile Diabetes Foundation Hotline	1-800-223-1138
DISEASES	
Alzheimer's Disease and Related Disorders Association	1-800-621-0379
(If calling from Illinois)	1-800-572-6037
American Leprosy Missions (Hansen's Disease)	1-800-543-3131
Huntington's Disease Society of America	1-800-345-4372
Lupus Foundation of America	1-800-558-0121
National Association for Sickle Cell Diseases, Inc.	1-800-421-8453
National Cystic Fibrosis Foundation	1-800-344-4823
National Health Information Center (NHIC)	1-800-336-4797
National Information Center for Orphan Drugs and Rare Diseases (NICODARD)	1-800-336-4797
National Organization for Rare Disorders (NORD)	1-800-477-NORD
National Parkinson Foundation	1-800-327-4545
(If calling from Florida)	1-800-433-7022
Parkinson's Education Program	1-800-344-7877
DOWN SYNDROME	
National Down Syndrome Congress	1-800-232-NDSC
National Down Syndrome Society	1-800-221-4602
DRUG INFORMATION	
Drug Abuse	1-800-544-KIDS
(If calling from New Jersey)	1-800-225-0196
National Clearinghouse for Alcohol and Drug Information	1-800-662-HELP
Parents Resource Institute for Drug Education (PRIDE)	1-800-221-9746
EDUCATION	
Educators Publishing Service, Inc. (Specific Learning Disabilities)	1-800-225-5750
National Committee for Citizens in Education	1-800-NETWORK
EMPLOYMENT	
Job Accomodation Network (JAN)	1-800-526-7234
(If calling from West Virginia)	1-800-526-4698
Job Opportunities for the Blind (JOB)	1-800-638-7518
EQUIPMENT	
AT&T National Special Needs Center	1-800-833-3232
EPILEPSY	
Epilepsy Foundation of America	1-800-EFA-1000
FINANCIAL AID	
Federal Hill-Burton Free Care Program	1-800-492-0359
(If calling from Maryland)	1-800-638-0742

Financial Aid for Education Available from the Federal Government	1-800-333-INFO
Health Care Financing Administration	1-800-638-6833
(if calling from Maryland)	1-800-492-6603
GROWTH DISORDERS	
Human Growth Foundation	1-800-451-6434
HEAD INJURY	
National Head Injury Foundation (For use by Patients & their Families only)	1-800-444-NHIF
HEALTH INFORMATION	
National Information System for Health Related Services	1-800-922-9234
National Health Information Center	1-800-336-4797
HEART DISORDERS	
Association of Heart Patients HeartLine	1-800-241-6993
IMMUNOLOGY	
National Jewish Center for Immunology and Respiratory Medicine	1-800-222-5864
KIDNEY DISORDERS	
American Kidney Foundation	1-800-638-8299
(if calling from Maryland)	1-800-492-8361
LEARINING DISABILITIES (DYSLEXIA)	
Educators Publishing Services, Inc.	
Specific Language Disabilities (Dyslexia)	1-800-225-5750
(if calling from Maryland)	1-800-792-5166
Orton Dyslexia Society	1-800-222-3123
LIVER DISORDERS	
American Liver Foundation	1-800-223-0179
MAINSTREAMING INTO THE COMMUNITY	
National Organization on Disability	1-800-248-ABLE
MEDIA	
Handicapped Media, Inc.	1-800-321-8708
Information Center for Special Education Media and Materials	1-800-772-7372
MEDICAL DEVICES	
Practioners' Reporting System	1-800-638-6725
(if calling form Maryland - call collect)	301-881-0256
MENTAL RETARDATION	
American Association on Mental Retardation	1-800-424-3088
(if calling from Washington, DC)	387-1968
Association for Retarded Citizens of the United States (ARC)	1-800-433-5255

MISSING CHILDREN

National Center for Missing and Exploited Children	1-800-843-5678

NEUROLOGICAL IMPAIRMENT/PERALYSIS

American Paralysis Association	1-800-225-0292
National Head Injury Foundation (For use by Patients & Families only)	1-800-444-NHIF
National Headache Foundation	1-800-843-2256
(If calling from Illinois)	1-800-523-8858
National Spinal Cord Injury Hotline	1-800-526-3456
(If calling from Maryland)	1-800-638-1733

NUTRITION

Beech-Nut Nutrition Hotline	1-800-523-6633
Gerber Products Co.	1-800-443-7327
Johnson & Johnson Baby Products Information	1-800-526-3967

ORGAN DONORS

The Living Bank	1-800-528-2971

ORTHOPEDIC PROBLEMS

International Shriners Headquarters	1-800-237-5055
(If calling from Florida)	1-800-282-9161

RARE DISORDES

Cornelia deLange Syndrome Foundation	1-800-223-8355
National Information Center for Orphan Drugs and Rare Diseases (NICODARD)	1-800-336-4797
National Organization for Rare Disorders (NORD)	1-800-477-NORD
National Reye's Syndrome Foundation	1-800-233-7393
(If calling from Ohio)	1-800-231-7393
National Tuberous Sclerosis Association	1-800-CAL-NTSA

REHABILITATION

D.T. Watson Rehabilitation Hospital	1-800-233-8806
National Rehabilitation Information Center (NARIC)	1-800-34-NARIC

RESPIRATORY DISEASES

National Jewish Center for Immunology and Respiratory Medicine Lung Line	1-800-222-LUNG

SPINA BIFIDA

Spina Bifida Hotline	1-800-621-3141

SUDDEN INFANT DEATH SYNDROME (SIDS)

National Sudden Infant Death Syndrome Foundation	1-800-221-SIDS

SUICIDE PREVENTION

National Adolescent Suicide Hotline	1-800-621-4000

SURGERY

National Second Surgical Opinion Program	1-800-638-6833

TELEPHONE USAGE FOR PERSONS WITH DISABILITIES	
Tele-Consumer Hotline	1-800-332-1124
(If calling from Washington, DC)	223-4371
TOYS (Safe)	
Consumer Product Safety Commission	1-800-638-2772
TRAUMA	
American Trauma Society	1-800-556-7890

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(Revised July, 1988)

NICHCY

National Information Center For Children And Youth With Handicaps
P.O. Box 1492 Washington, D.C. 20013

RESOURCES IN KANSAS

STATE DEPARTMENT OF EDUCATION

James E. Marshall, Dir.
Div. of Special Education
State Dept. of Education
120 E. 10th St.
Topeka, KS 66612
(913) 296-3866
(800) 332-6262

Lucille Paden
Education Program Specialist
Div. of Special Education
State Dept. of Education
120 E. 10th Street
Topeka, KS 66612
(913) 296-7454

STATE VOCATIONAL REHABILITATION AGENCY

Joan B. Watson, Comm.
Rehabilitation Services
Dept. of Social and Rehab.
Services
Biddle Building, 2nd Floor
2700 W. Sixth St.
Topeka, Ks 66606
(913) 296-3911

Norma J. Phillips, Admin.
Client Assistance Program
Rehabilitation Services
Dept. of Social and Rehab.
Services
Biddle Building, 2nd Floor
2700 W. Sixth Street
Topeka, KS 66607
(913) 296-3911
(800) 432-2326

OFFICE OF STATE COORDINATOR OF VOCATIONAL EDUCATION FOR HANDICAPPED STUDENTS

Carolyn Olson
Program Specialist
Vocational Education
State Dept. of Education
120 E. 10th St.
Topeka, KS 66612
(913) 296-4921

STATE MENTAL HEALTH AGNECY

Gerald T. Hannah, Comm.
Div. of Mental Health and
Retardation Services
Docking State Office Bldg., 5th Fl.
Topeka, KS 66612
(913) 296-3773

STATE MENTAL HEALTH REPRESENTATIVE FOR CHILDREN

Jane Adams
Education Program Specialist for
MH and Youth Services
Youth Center at Topeka
1440 N.W., 25th Street
Topeka, KS 66617
(913) 296-7711

STATE MENTAL RETARDATION PROGRAM

Tony Lybarger
Dir. of Institutional Programs
Div. of Mental Health and
Retardation Services
Docking State Office Bldg., 5th Fl.
Topeka, KS 66612
(913) 296-3471

STATE DEVELOPMENTAL DISABILITIES PROGRAM

John Kelly, Exec. Dir.
Planning Council for Developmental
Disabilities
Docking State Office Bldg., 5th Fl.
Topeka, KS 66612
(913) 296-2608 (TDD & Voice)

PROTECTION AND ADVOCAVY AGENCY-DD, MH

Joan Strickler, Exec. Dir.
Advocacy & Protective Service
for the DD, Inc.
513 Leavenworth St., Suite 2
Manhattan, KS 66502
(913) 776-1541
(800) 432-8276

CLIENT ASSISTANCE PROGRAM

See State Vocational Rehabilitation Agency

PROGRAMS FOR CHILDREN W/SPECIAL HEALTHCARE NEEDS

Cassie Lauver, Program Director
Programs for Children w/Special
Healthcare Needs
Landon State Office Building
900 S.W. Jackson St.
Topeka, KS 66620
(913) 862-9360

DISABILITY AGENCIES

Autism
Margene Dipalling, Pres.
Kansas State Society for
Children & Adults with Autism
5856 S.W. 28 Terrace
Topeka, KS 66614
(913) 272-7412

Cerebral Palsy
Dave Jones, Exec. Dir.
United Cerebral Palsy Assn. of Kansas. Inc.
P.O. Box 8217
Wichita, KS 67208
(316) 688-1888

Epilepsy
Curtis Gaylor, Exc. Dir.
Epilepsy-Kansas, Inc.
1127 N. Emporia
P.O. Box 284
Wichita, KS 67201-0284
(316) 269-2526

Greater Kansas City Epilepsy Foundation
4949 Rockhill Road
Kansas City, MO 64110

Learning Disabilities
Joseph Swalwell, Pres.
Kansas Assn. for Children
with Learning Disabilities
P.O. Box 4424
Topeka, KS 66605
(913) 272-0033

Mental Health
Kay Mettner, Exec. Dir.
Mental Health Assn. in Kansas
1205 Harrison
Topeka, KS 66612
(913) 357-5119

Mental Retardation
Brent Glazier, Exec. Dir.
Kansas Assn. for Retarded Citizens
11111 West 59th Terrace
Shawnee, KS 66203
(913) 268-8200

Speech and Hearing
Dixie Heinrich, Coor.
KS Speech-Language-Hearing Assn.
3117 28th St.
Great Bend, KS 67350

Spina Bifida
Spina Bifida Assn. of Kansas City
P.O. Box 5462
Kansas City, MO 64131

University Affiliated Facilities
Joseph Hollowell, M.D., Dir.
Kansas Univ. Affiliated Faculty-
Kansas City
Children's Rehabilitation Unit
Kansas Univ. Medical Center
39th and Rainbow Boulevard
Kansas City, KS 66103
(913) 588-5900

Jean Ann Summers, Dir.
Kansas Univ. Affiliated Facility Central Office
Bureau of Child Research
348 Haworth Hall
University of Kansas
Lawrence, KS 66045
(913) 864-4950

Joseph Spradlin, Dir.
Kansas University Affiliated Faculty at Parsons
2601 Gabriel
Parsons, KS 67357
(316) 421-6550 x 1754

OTHER ORGANIZATIONS

Marie Abney, Pres.
Goodwill Industries - Easter
Seal Society of Kansas
3636 N. Oliver
Wichita, KS 67220
(316) 744-0483
The Make a Difference
Network
(800) 332-6262 (in Kansas)
(Statewide information and
referral services)

Michael Bylington, Pres.
KS Assn. for Blind and
Visually Impaired
P.O. Box 292
Topeka, KS 66601

Jill Long, Contact Person
KS Down Syndrome Congress
12117 Nantucket
Wichita, KS 67235

Mary Pat Beals, Pres.
KS Head Injury Assn.
9401 Nall
Overland Park, KS 66207

PARENT ORGANIZATIONS

Patricia Gerdel, Dir.
Families Together
P.O. Box 86153
Topeka, KS 66686
(913) 273-6343

Kathy Payne, Dir.
KS Parent Assn. For Deaf
and Blind Children
1915 S.E. Herschell Rd.
Tecumseh, KS 66542

AGES OF ELIGIBILITY

Children are eligible for educational servies from 3 to 21. Some Local Educcation Agencies provide services for children under 3 years of age. (The 1986 reauthorization of the Education of the Handicapped Act (EHA) through P.L. 99-457 provides that special education service made be available by 1990-91 to children 3-5. The timeline may be extended if congress does not appropriate an adequate level of funding. In addition, discretionary funds are to be available to states to serve children birth through age 2).

Other Useful References

Ayres, A.J. (1985). Developmental dyspraxia and adult onset apraxia. Torrance, CA: Sensory Integration International.

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Bobath, B., & Bobath, K. (1975). Motor development in the different types of cerebral palsy. London: William Heinemann Medical Books Ltd.

Bobath, K. (1978). The motor deficit in patients with cerebral palsy. London: William Heinemann Medical Books Ltd.

Boehme, R. (1988). Improving upper body control: An approach to assessment and treatment of tonal dysfunction.

Erhardt, R.P. (1982). Developmental hand dysfunction: Theory, assessment, and treatment. Laurel, MD: RAMSCO Publishing Company.

Finnie, N.R. (1975). Handling the young cerebral palsied child at home. New York: E.P. Dutton.

Mailloux, Z. (Ed.). (1987). Sensory integrative approaches in occupational therapy. New York: Haworth Press.

McClannahan, C. (1987). Feeding and care for infants and children with special needs. Rockville, MD: The American Occupational Therapy Association, Inc.

SECTION 3

APPENDICES

APPENDIX 1

University of Kansas Occupational Therapy Department and Fieldwork Sites Contract

MEMORANDUM OF UNDERSTANDING
BETWEEN
THE UNIVERSITY OF KANSAS
and

____

THIS AGREEMENT, entered into this _____day of ___________________, 19____,
by and between The University of Kansas (Hereinafter "University") and
____ (Hereinafter "Facility:).

WITNESSETH:

WHEREAS, the University wishes to obtain clinical facilities for students enrolled in various programs of the University's Department of Occupational Therapy Education and WHEREAS, the Facility wishes to develop and utilize fieldwork experience for students; NOW THEREFORE, in consideration of these premises and of the mutual agreements set forth herein, the University and the Facility agree as follows:

The University and the Facility mutually agree:

1. to extablish the educational objectives for the fieldwork experience, devise methods for their implementation, and evaluate continually the effectiveness of each, and;
2. to make no distinction among students covered by this Agreement, on the basis of race, color, sex, creed, age, or national origin.
3. that references or transcripts pertaining to students in the program shall not be provided to a third party by the University or the Facility without written authorization from the student. (Family Educational Rights and Privacy Act of 1974.)

The University agrees:

1. to assume responsibility for assuring continuing compliance with the educational standards established by the American Occupational Therapy Association, and;
2. to establish and maintain communication with the Fieldwork Supervisor of the Facility on items pertinent to occupational therapy education. (Such communication may include, but not be limited to, a description of the curriculum, relevant course outlines, policies, faculty, and major changes in this information. (On-site visits will be arranged when feasible.)
3. to notify the Fieldwork Supervisor and the Facility, at a time mutually agreed upon, of its planned schedule of student assignment, including the name of the student, level of academic preparation, and length and dates of fieldwork experience;
4. to refer to the Facility only those students who have satisfactorily completed the prerequisite didactic portion of the curriculum which is applicable to the Facility;
5. to inform the student of the Facility's requirements for acceptance, (citizenship, health status, etc.);
6. to advise the assigned student of the responsibility for:
    - a. complying with the existing pertinent rules and regulations of the Facility;
    - b. providing the necessary and appropriate uniforms required but not provided by the Facility;
    - c. providing his/her transportation and living arrangements when not provided by the Facility;
    - d. conforming to the standards and practices established by the University for students receiving training in the Facility.

7. the University agrees to refer to the Facility only those students who are covered by the University's professional liability insurance policy;

8. to supply the Fieldwork Supervisor with appropriate forms to be used in evaluating the performance of the assigned student, and;

9. to have the student provide prior to the commencement of the student assignment such confidential information as may be required by the Facility or deemed necessary for the training and guidance of the student.

The Facility Agrees:

1. to designate as Fieldwork Supervisor the staff member who will be responsible for the planning and implementation of the Fieldwork Experience. The staff member so designated shall meet the criteria established by the American Occupational Therapy Association for supervising students;

2. to provide the Fieldwork Supervisor with time to plan and implement the Fieldwork Experience including, when feasible, time to attend relevant meetings and conferences;

3. to provide the physical facilities and equipment necessary to conduct the Fieldwork Experience;

4. to have available a written description of the Fieldwork Experience being offered;

5. to advise the University of any changes in its personnel, operation, or policies which may affect fieldwork experience;

6. to determine and notify the University of the number of students which it can accomodate during a given period of time;

7. to provide the assigned student, whenever possible, with use of library facilities and reasonable study and storage space;

8. to provide the assigned student with a copy of the Facility's existing pertinent rules and regulations with which the student is expected to comply;

9. to make available, whenever possible, emergency health care for the assigned student (the student to be otherwise responsible for his or her health care);

10. to evaluate the performance of the assigned student on a regular basis using the evaluation form developed by the American Occupational Therapy Association and supplied by the University;

11. to forward the completed evaluation to the University within one (1) week following conclusion of the student's fieldwork experience;

12. to Advise the University at least by mid-term of any serious deficiency noted in the ability of the assigned student to progress toward achievement of the stated objectives of the fieldwork experience (it then becoming the mutual responsibilities of the assigned student, the Fieldwork Supervisor, and the Fieldwork Coordinator to devise a plan by which the student may be assisted to achieve the stated objectives);

13. to have the right to terminate any student whose health or performance is detrimental to patient well-being or to achievement of the stated objectives of the fieldwork experience;

14. to notify the University of any such terminations, and;

15. to support continuing education and professional growth and development of those staff who are responsible for student supervision.

Terms of Agreement:

1. This agreement shall be effective when executed by both parties for a period of one year and shall be automatically renewed annually unless otherwise terminated by written notice by one of the parties in accordance with paragraph three (3) below.
2. This agreement may be revised or modified by written amendment when both parties agree to such amendment.
3. If either party wishes to terminate this agreement, it is understood that written notice of at least three (3) months shall be given the other party.

IN WITNESS WHEREOF, the University and Facility have caused this Agreement to be signed by their respective administrative officers.

______________________________ (Facility)	THE UNIVERSITY OF KANSAS
BY: ______________________________	BY: ______________________________ D. Kay Clawson, M.D. Executive Vice Chancellor
______________________________ title	
	BY: ______________________________ James Cooney, Ph.D. Dean, School of Allied Health
Approved as to Form and Substance:	
______________________________ Steven L. Ruddick University Attorney	BY: ______________________________ Letha J. Mosley, OTR Academic Fieldwork Coordinator

APPENDIX 2

Classroom Integration Questionnaire (CIQ)

From Kaufman, M., Agard, J. & Semmel, M. (1985). Mainstreaming: Learners and Their Environment. Cambridge, MA: Brookline Books. Used with permission.

CLASSROOM INTEGRATION QUESTIONNAIRE

Scale and Items

Directions: Read each behavioral description and circle the corresponding letter to the left of each item as follows:

A. In regular classroom

B. In regular classroom all day with supplemental materials and advice

C. In regular classroom part of the day with supplemental materials and advice

D. In special class all day.

E. Not for public education

(Circle only one letter item.)

A B C D E 1. Joe is in an electric wheelchair. He can move his shoulders and elbows some, but has only minimal movement in his hands. He wears hand splints. He has a catheter that needs to be checked periodically.

A B C D E 2. Larry is totally dependent in all his care. He is transported in a wheelchair. He has a few gestures for communication.

A B C D E 3. George at times answers questions inappropriately. His thoughts do not always seem to flow together. He has trouble pronouncing words with the letters r and l.

A B C D E 4. Larry takes medication for seizure control each morning before coming to school. Occasionally he has a seizure at school. He does not appear to have any warning the seizures are going to begin.

A B C D E 5. Dick is able to walk around the school in the morning but by the afternoon he requires the use of a wheelchair.

A B C D E 6. Chester is deceitful, tells lies and cheats in school and at play; he has been involved in several thefts and is a persistent truant.

A B C D E 7. Billy tends to skip words while reading and needs to use a moving finger, pencil or other artifact to avoid omissions.

A B C D E 8. Sam has just returned to school after being hospitalized and at home for severe burns for a year. He wears a special pressure garment to reduce the swelling over most of his body.

A B C D E 9. Jerry does reasonably good work as long as he is left alone; he becomes extremely tense and anxious however, whenever an adult speaks to him. He becomes very upset when he makes a mistake and just freezes up when called on in class.

A B C D E 10. Richard is a likeable boy; he makes friends easily and is very sensitive of how others see him. He is two years behind his peers in math skills and four years behind in reading.

A B C D E 11. Dotty is eight; she has difficulty following the class activities, and doesn't seem able to learn to read at all.

A B C D E 12. Rachel's muscles in her legs are tight and her legs turn in when she walks. She can walk short distances (such as within her classroom) by herself, but requires a walker to get from room to room or down the hall to the bathroom or cafeteria.

A B C D E 13. Henry has an artificial leg. He is able to do most things by himself, but does need assistance at times. He can't always keep up with the other kids on the playground or in physical education.

A B C D E 14. Judy eventually mutilates or destroys everything that gets into her hands; her books are marked and torn, her desk is inkstained and scarred, and she has even managed to crack a blackboard panel.

A B C D E 15. Alan seems to have very few friends. He stays by himself most of the time watching the other children. He is never chosen for games and never interacts with other children about his school work.

A B C D E 16. Katy has only partial use of her right hand. She is unintelligible in speech and drools frequently. She is clumsy.

A B C D E 17. Susan frequently reads words and numbers reversed and confuses similar words and letters when reading, but does alright with oral spelling.

A B C D E 18. Earl is eight and wears cowboy boots to class because he hasn't learned to tie his own shoelaces; he is generally cheerful and well-behaved, but talks very little in class and is incapable of doing anything but the most simple work assignments.

A B C D E 19. Stella can read orally but doesn't comprehend the meaning of what she reads. She can identify all the words in a sentence but cannot paraphrase the sentence or tell what it means.

A B C D E 20. Alfred is defiant and stubborn, likely to argue with the teacher, be willfully disobedient and otherwise interfere with the normal classroom discipline.

A B C D E 21. Chloe wears long-leg braces. Twice daily she needs to stand in a standing table for weight-bearing.

A B C D E 22. Luke has no movement from his waist down. He can independently get around in his wheelchair.

A B C D E 23. Nancy has to take insulin four times a day for her diabetes. One administration must be given at school.

A B C D E 24. Chuck doesn't seem able to catch on to things as quickly as most, and needs to have things explained over and over again; eventually, though, he appears to learn everything the other do, even though it has taken longer.

A B C D E 25. Timmy is overly aggressive. He seems to pick fights, tease and bully other children. He is a poor sport and argues about rules and decisions.

A B C D E 26. Doris is absent-minded and a daydreamer; she seems unusually quiet and withdrawn, avoids others and is inhibited and restrained in her behavior.

A B C D E 27. Jerod wears long leg braces and twister cables with which he needs some assistance in the bathroom.

A B C D E 28. Betty works very rapidly and usually is the first one finished in her section. However, most of her responses are incorrect.

A B C D E 29. Sammy, in second grade, can't correctly repeat oral directions or correctly repeat a 7-10 word statement. He omits and/or transposes words, can't recite days of the week, the alphabet or numbers in order.

A B C D E 30. John frequently misinterprets simple statements and directions given to the group; he does better if he can repeat the directions to the teacher.

A B C D E 31. Milly is slow to comprehend instructions that involve directionality. She is confused about left-right, up-down and confuses prepositions (over, under) in her oral expression.

A B C D E 32. Beth is not able to achieve in any area of academics on a level with the other children. All areas of academics must be done on an individual basis.

A B C D E 33. Martha is a hyperactive child. She is always jumping out of her seat, running around the room; she can't seem to sit still for any length of time. While she's running around, she annoys and disrupts other children.

A B C D E 34. Sam uses a magnifier and large print to do his classroom assignments.

A B C D E 35. Although Eric seems very bright doing science experiments and other activities involving manipulation of materials, he still does poorly in his reading and arithmetic assignments.

A B C D E 36. Richard is overly dependent on the teacher. He seeks out excessive adult attention. He has no sense of self-direction. He never does anything without being pushed or prodded.

A B C D E 37. Brenda seems very unhappy and depressed in school. She sometimes appears to have been crying and never seems to smile even when she's playing with the other children.

A B C D E 38. Adrienne wears a phonic ear for functional hearing. The phonic ear batteries must be checked each morning. Occasionally, the ear will whistle and needs to be adjusted.

A B C D E 39. Florence is immature and oversensitive, likely to burst into tears at the slightest provocation. She pouts or sulks if she can't do what she wants to do.

A B C D E 40. Carla is a persistent talker, whisperer and notepasser.

Adapted from Classroom Integration Questionnaire Mainstreaming: Learners and Their Environment. M. Kaufman, J.A. Agard & M.I. Semmel, Brookline Books, Cambridge, MA, 1985.

M.O.R.E. Managing Occupational Therapy in Rural Education Project. The University of Kansas Occupational Therapy Curriculum, 1987.

APPENDIX 3

Family Questionnaire

Adapted from the *Children's Questionnaire* used in Project PRME. Kaufman, M., Agard, J. & Semmel, M. (1985). Mainstreaming: Learners and Their Environment. Cambridge, MA: Brookline Books. Used with permission.

Family Questionnaire

Please answer each question to the best of your knowledge.

1. How many people live in your home? Count your father, mother, brothers, sisters, aunts, uncles, grandparents and any others who live with you.

2. How many children are in your family? (Children refers to children under 18).

3. How many telephones do you have in your home?

4. Does your family have a record player, hi-fi, or stereo?

5. What large appliances do you have in your kitchen?

6. Does your family have a dictionary? What type?

7. Does your family have an encyclopedia? What type?

8. What types of transportation do family members use?

9. Does your family have an air conditioner?

10. Does your family get a newspaper every day?

11. Does your family get any magazines regularly at home?

12a. What kinds of books do you have at home for children to read?

12b. How many books do you have?

13. How often did adults read to children before they entered school.

14a. Do children read to themselves?

14b. How often do they read to themselves?

15a. Does mother or father or someone in your family read to the children now?

15b. (If yes) How often does someone read to them?

16a. Do you have any games in your home to play with such as card games, checkers, Monopoly, Chutes and Ladders, Sand Land, Spirograph and any others?

16b. (If yes) How many games do you have?

17a. Do children play with these games with your friends or brothers and sisters?

17b. (If yes) How often do you play these games?

18a. Does mother or father or some grownup in your family play these games with children?

18b. (If yes) How often do grownups in your family play these games with children?

19a. Does your family go on trips to playgrounds, parks or other places for picnics, swimming or fishing?

19b. (If yes) How often do you go on trips?

20a. Do mother or father help children learn to do important jobs around your home like cooking or fixing the car?

20b. (If yes) How often do they help children learn their job?

21. How many television sets does your family have.

22. On school days, how much time do children watch TV at home?

23. Do mother or father usually watch TV with children?

24a. Do children have work to do at home for school?

24b. (If yes) About how much time do they spend each day on homework?

25a. Do children and your parents talk about school work?

25b. (If yes) How often do you talk about school work?

26. Did children go to kindergarten?

27. Did children go to nursery school before going to kindergarten?

28. How do children usually get to school in the morning?

29. Do children in your family tend to want to stop going to school as soon as they can? (At age 16)

30. Do children usually want to finish high school?

31. Do children in your family usually want to go to college?

32. When children in your family finish school, what sort of job do you think they will have?

33. Do children in your family usually like school?

This questionnaire is adapted from the Children's Questionnaire used in Project PRME conducted in Texas in the 1970's.

APPENDIX 4

Attitudes Toward School Based Services
(ATSBS)

From Gilfoyle, Elnora M. (1981). Training: Occupational Therapy Educational Management in Schools: A Competency Based Educational Program (TOTEMS Project). Rockville, MD: American Occupational Therapy Assocation, Inc. Used with permission.

TRAINING: OCCUPATIONAL THERAPY EDUCATIONAL MANAGEMENT

ATTITUDES TOWARD SCHOOL BASED SERVICES*

ATSBS

CODE____________________

DATE____________________

READ EACH STATEMENT AND CIRCLE THE APPROPRIATE NUMBER ON THE ATTACHED ANSWER SHEET.

PLEASE ANSWER EVERY QUESTION

1. School systems should have special school facilities for handicapped students.
2. Teachers have little interest in interdisciplinary collaboration regarding students placed in their classroom.
3. Teachers in regular classroom programs are not prepared to have handicapped students placed in their classroom.
4. Because the law mandates occupational/physical therapy services, school administrators have negative feelings toward therapists.
5. Teachers/school personnel have the major responsibility to adapt to the inclusion of new professions, such as occupational/physical therapy.
6. The development/preparation of IEP's require too much time for the value of its outcomes/product.
7. Special education teachers have little knowledge and skills about occupational therapy services.
8. Related services should have administrative/financial priorities over physical education, music and/or art programs for handicapped students.
9. School programs should facilitate the placement of handicapped students into regular classrooms.

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*Adapted from the Attitude Toward Disabled Persons (ATDP) Scale.

10. Occupational therapy has more to offer preschool and early primary school-aged students than to students enrolled in secondary educational programs.

11. Principles resent parental requests for related services for their children.

12. Occupational therapists should treat those children with sensory integrative dysfunction as the first priority for occupational therapy services.

13. Public schools should have the responsibility to provide medical services needed to enhance the students' potential for learning.

14. Principals and/or special education directors should provide supervision to occupational therapists in school-based programs.

15. Teachers are interested in working with parents regarding the development of educational programs for their students.

16. The occupational therapist should be present and participate at the IEP staffings for students who may be and are receiving occupational therapy services.

17. School-based programs/facilities should become the major area for occupational therapy services with school-aged people.

18. Principals are not aware of the occupational therapy services that are being provided in their schools.

19. Teachers do not understand the basic principles of sensory-motor development.

20. The full range of physical/occupational therapy services needed by handicapped students should be provided by and financed through school budgets.

21. Adaptive physical education teachers feel they can provide occupational/physical therapy services to handicapped students.

22. Vocational teachers/counselors feel they do not need consultation from an occupational therapist regarding career development programs for handicapped students.

23. School administrators hire occupational therapists as "token" employees, to satisfy the mandates of PL 94-142.

24. Because of their medical background, therapists are threatening to teachers.

25. Therapists have little knowledge about the philosophies of education and/or the educational system.

26. Developing self-help skills and daily living tasks should be a major priority for occupational therapy educational programs.

27. Principals are interested in developing occupational therapy programs within their schools.

28. Regular classroom teachers have little knowledge of occupational therapy services.

29. Occupational therapists employed in schools should not be supervised by non-medically trained personnel.

30. A physician's referral should be required for handicapped students receiving direct service care by an occupational therapist.

31. Occupational therapists have more knowledge about child development than teachers.

32. Occupational therapists should spend the majority of the school day providing direct one-to-one/group treatment sessions.

33. PL 94-142 has had a negative impact upon educational systems.

34. School administrators believe Adaptive Physical Education Specialists can carry out the roles and functions of occupational/physical therapists.

35. Salaries for occupational therapists should be on a higher pay scale than those of teachers.

36. Special education directors have little knowledge about occupational therapy services.

CODE____________________

DATE____________________

ATSBS **ANSWER SHEET**

Use this answer sheet to indicate how much you agree or disagree with each of the statements. Circle the appropriate number from -3 to +3 depending upon how you feel about each statement.

-1:	I DISAGREE A LITTLE	+3:	I AGREE VERY MUCH
-2:	I DISAGREE PRETTY MUCH	+2:	I AGREE PRETTY MUCH
-3:	I DISAGREE VERY MUCH	+1:	I AGREE A LITTLE

PLEASE ANSWER EVERY ITEM

(1)	-3	-2	-1	+1	+2	+3	(19)	-3	-2	-1	+1	+2	+3
(2)	-3	-2	-1	+1	+2	+3	(20)	-3	-2	-1	+1	+2	+3
(3)	-3	-2	-1	+1	+2	+3	(21)	-3	-2	-1	+1	+2	+3
(4)	-3	-2	-1	+1	+2	+3	(22)	-3	-2	-1	+1	+2	+3
(5)	-3	-2	-1	+1	+2	+3	(23)	-3	-2	-1	+1	+2	+3
(6)	-3	-2	-1	+1	+2	+3	(24)	-3	-2	-1	+1	+2	+3
(7)	-3	-2	-1	+1	+2	+3	(25)	-3	-2	-1	+1	+2	+3
(8)	-3	-2	-1	+1	+2	+3	(26)	-3	-2	-1	+1	+2	+3
(9)	-3	-2	-1	+1	+2	+3	(27)	-3	-2	-1	+1	+2	+3
(10)	-3	-2	-1	+1	+2	+3	(28)	-3	-2	-1	+1	+2	+3
(11)	-3	-2	-1	+1	+2	+3	(29)	-3	-2	-1	+1	+2	+3
(12)	-3	-2	-1	+1	+2	+3	(30)	-3	-2	-1	+1	+2	+3
(13)	-3	-2	-1	+1	+2	+3	(31)	-3	-2	-1	+1	+2	+3
(14)	-3	-2	-1	+1	+2	+3	(32)	-3	-2	-1	+1	+2	+3
(15)	-3	-2	-1	+1	+2	+3	(33)	-3	-2	-1	+1	+2	+3
(16)	-3	-2	-1	+1	+2	+3	(34)	-3	-2	-1	+1	+2	+3
(17)	-3	-2	-1	+1	+2	+3	(35)	-3	-2	-1	+1	+2	+3
(18)	-3	-2	-1	+1	+2	+3	(36)	-3	-2	-1	+1	+2	+3
							(37)	-3	-2	-1	+1	+2	+3

APPENDIX 5

Occupational Therapist Needs Survey

OCCUPATIONAL THERAPIST

Needs Survey

1. What roles have you performed in the schools that you serve?

2. List the top 5 content areas you feel are necessary in pre-service training:

    1.
    2.
    3.
    4.
    5.

    Did you feel you had adequate preservice training to meet the roles you have been assigned? Explain.

3. List the top 5 challenges you see in occupational therapy service delivery to educational settings:

    1.
    2.
    3.
    4.
    5.

4. List the top 5 needs you see in occupational therapy service delivery to educational settings:

    1.
    2.
    3.
    4.
    5.

5. What inservice topics have you presented to other professionals and staff for your job?

What topics do you feel are relevant for basic and advanced inservice training of other personnel?

6. What other team members do you work with?

_____ educator

_____ special educator

_____ speech therapist

_____ physical therapist

_____ other ___________

_____ psychologist

_____ social worker

_____ behavior specialist

_____ parents

How often do you have team meetings? (This includes, but is not limited to IEP meetings.)

7. What is your service area?

_____ number of schools

_____ miles traveled

_____ time spent traveling per week

_____ total number of children served

8. What types of children do you currently serve?

_____ physically and other health impairment (including autism)

_____ mental retardation

_____ specific learning disabled

_____ behavior disorders

_____ other ___________

_____ visually impaired

_____ severly multiply handicapped/deaf blind

_____ early childhood handicapped

_____ language, speech, and hearing impaired

9. How many children do you currently serve?

_____ 0 - 3 years

_____ 3 - 5 years

_____ 5 - 10 years

_____ 10 - 15 years

_____ 15 - 20 years

_____ 20 - 25 years

10. List the 5 occupational therapy assessments most frequently used in your setting.

1.

2.

3.

4.

5.

11. List the top 5 resources you find most helpful to you as an occupational therapist (including human, curriculum, and professional resources).

1.

2.

3.

4.

5.

APPENDIX 6

Pediatric Competencies I & II

Competencies I

1. The child generally demonstrates a pincer grasp using opposition of the thumb and forefinger at:
   a. 2-3 months
   b. 8-10 months
   c. 15-18 months
   d. 19-20 months

2. A well organized body scheme develops as a result of integration of:
   a. vestibular input
   b. proprioceptive input
   c. tactile input
   d. all of the above

3. The major tasks that confront the school age child are:
   a. achieving personal freedom and developing a healthy self-image
   b. forming friendships and peer groups
   c. developing fundamental academic skills of reading, writing, and math
   d. all of the above

4. Adequate motor planning is dependent on:
   a. good vision
   b. a well organized body scheme
   c. visual sequencing
   d. good academic skills

5. Distinguishing foreground stimulation from background stimulation can be described as the ability to:
   a. differentiate one stimulus from another
   b. perceive an object pattern in the environment as a separate entity and keep it separate
   c. to recognize and identify a form even when it is presented in a different way
   d. none of the above

6. For a child to attend to a task, he must be able to:
   a. react to habituated stimuli
   b. be able to motor plan that task
   c. inhibit surrounding stimuli
   d. none of the above

7. An internal awareness of the right and left sides of the body and the relationship between the two is referred to as:
   a. right-left discrimination
   b. bilateral coordination
   c. bilateral integration
   d. crossing the midline

Match the following:

8. (C) Describe development as genetically pre-programmed.

9. (A) Describe the progression of development in making decisions regarding right and wrong.

10. (B) Describe the progression of cognitive development.

11. (D) Describe psychological development as resulting from the interaction between maturational processes and society.

a. Kohlberg
b. Piaget
c. Gesell
d. Erickson

12. The sensory system that reinforces 85% of what the child learns through his other sensory systems is the:
    a. auditory system
    b. tactile system
    c. vestibular system
    d. visual system

13. (*) Hand dominance usually occurs around
    a. 3-4 years
    b. 4-5 years
    c. 5-6 years
    d. 7-8 years

14. The newborn infant in the first week recognizes his mother through:
    a. vision
    b. hearing
    c. smell
    d. all of the above

15. Frequent ear infections may cause:
    a. speech and language delays
    b. balance problems
    c. all of the above
    d. none of the above

16. The child that uses a few real words interspersed with jargon is probably between:
    a. 9-11 months
    b. 16-19 months
    c. 24-28 months
    d. 30-36 months

17. Children generally walk between:
    a. 6-10 years
    b. 11-15 years
    c. 16-18 months
    d. 20-22 months

18. The first physical change that occurs in the child that signals the approach of adolescence is
    a. Secondary sexual changes
    b. Growth spurts in height and weight
    c. Onset of menarche and nocturnal emissions
    d. None of the above.

19. To assess a 9 year old child's ability to accurately reproduce drawings, which of the following tools would you use:
    a. Test of Visual Perceptual Skills
    b. Denver Developmental Screening Test
    c. Motor-free Visual Perception Test
    d. Test of Visual Motor Skills

20. __________ give us the framework to allow us to reach, grasp, and release
    a. prehensile reactions
    b. primitive reflexes
    c. righting reactions
    d. equilibrium reactions

21. A primitive reflex:
    a. is pathological when present in newborns
    b. is considered obligatory when persistent beyond time they should be integrated
    c. is never fully integrated
    d. none of the above

22. An infant acquires reach and touch skills with the integration of
    a. asymmetrical tonic neck
    b. plantar grasp
    c. crossed extension
    d. optical righting

23. A normal, term newborn will typically have
    a. rooting reflex
    b. asymmetrical tonic neck reflex
    c. visual placing
    d. symmetrical tonic neck reflex

24. The normal gestation period for interuterine fetal development is
    a. 30-34
    b. 38-42
    c. 36-38
    d. 42-44

25. The primary job of the neonate is to:
    a. reach for objects
    b. learn to roll over
    c. accomodate to extrauterine life
    d. begin eating solid foods

Competencies II

1. According to the laws regarding special education occupational therapy is classified as:
   a. a medical service
   b. an itinerant service
   c. a related service
   d. a school health service

2. Which one of the following team members is not considered a related service:
   a. paraprofessional
   b. adaptive physical education
   c. vision specialist
   d. school psychologist

3. The procedures for developing an Individual Education Plan must include:
   a. statement of current level of function, long term goals, and physician's authorization
   b. independent evaluation data, long term goals, short term objectives
   c. statement of current level of function, long term goals, description of extent of participation in regular education
   d. annual goals and short term objectives

4. According to federal regulations, handicapped students and their parents are entitled to ____________ if there are unresolved conflicts within the educational system.
   a. monetary compensation
   b. independent services
   c. due process
   d. free legal advice

5. Kansas Medicaid and Kansas Crippled and Chronically Ill Children Services pay for occupational therapy services for children only if the services are considered:
   a. habitative
   b. on-going
   c. developmental
   d. rehabilitative

6. School-aged children with handicaps receive services primarily through funds provided by:
   a. PL 94-142
   b. PL 99-457
   c. medical insurance
   d. federal supplementary income

7. Children 0-5 with at-risk or handicapping conditions receive funding for services by:
   a. PL 94-142
   b. PL 99-457
   c. medical insurance
   d. federal supplementary income

8. Characteristics of athetoid cerebral palsy include:
   a. increase muscle tone with resistance to passive movement
   b. decreased muscle tone with disturbances in balance and equilibrium
   c. fluctuating muscle tone with difficulty sustaining postural control
   d. none of the above

9. Autism is characterized by:
   a. bizarre behavior
   b. age appropriate language skills
   c. onset of symptoms during 3rd year of life
   d. all the above

10. Children classified as emotionally disturbed can be characteristically described as:
   a. shy and withdrawn
   b. aggressive and acting out
   c. a and b
   d. none of the above

11. A child with a measured IQ score of 48 would be classified in school as:
   a. educabably mentally retarded
   b. trainably mentally retarded
   c. severely mentally retarded
   d. autistic

12. A major concern associated with both visually and hearing impaired children in development is:
   a. learning to communicate
   b. inadequate gross motor skills
   c. inadequate concept formation
   d. inadequate fine motor skills

13. Down Syndrome is an example of what type of birth defect?
   a. physical malformation
   b. chromosomal abnormality
   c. in-born error of metabolism
   d. perinatal complications

14. To be classified as mentally retarded the following characteristics must be present:
   a. subaverage general intellectual functioning
   b. age appropriate adaptive behavior
   c. manifested during the developmental period
   d. all of the above

15. A non-progressive lesion in the immature central nervous system that results in a disorder of posture and movement describes
    a. spina bifida occulta
    b. Hurler's syndrome
    c. cerebral palsy
    d. mental retardation

16. Curriculum emphasis of simple math and reading skills would be appropriate for a nine year-old child educationally identified as
    a. multiply handicapped
    b. trainable mentally handicapped
    c. health impaired
    d. learning disabled

17. Behavioral short term objectives developed for an individual education program should be
    a. relevant to function
    b. measurable (specific criteria)
    c. achievable in 1-year
    d. all of the above

18. ______________ consultation is preferred by educators and administrators because. . .
    a. expert model
    b. collaborative model
    c. mental health model
    d. medical model

19. Teaching and direct supervision of other professionals or paraprofessionals who are involved with implementation of intervention procedures describes the service provision pattern of:
    a. individual direct service
    b. monitoring
    c. group direct service
    d. case consultation

For each of the following vingettes choose the one best answer in each of the following categories:

Diagnoses:
a. cerebral palsy
b. muscular dystrophy
c. learning disabilities
d. developmental delay

a. autism
b. severe/multiply handicapped
c. visually impaired
d. Down Syndrome

a. spina bifida
b. educable mentally handicapped
c. trainable mentally handicapped
d. learning impaired

Treatment Approach:

a. Neurodevelopmental Treatment
b. Sensory Integration
c. Holistic approach to learning disabilities
d. Spatio-temporal
e. Neurophysiological rehabilitation

Assessment Battery:

a. Beery Test of Visual Motor Integration
Test of Visual Perceptual Skills
Bruininks-Oseretsky Test of Motor Proficiency
Southern California Sensory Integration Test

b. Reflex Assessment
Brigance Inventory of Early Skills
Muscle Test
Range of Motion Evaluation

c. Peabody Developmental Motor Scales
Developmental Programming for Infants and Young Children
Denver Developmental Screening Test
Hawaii Early Learning Profile

d. Prevocational Assessment
Daily Life Tasks Inventory
Environmental Assessment

e. Reflex Assessment
Range of Motion Evaluation
Test of Visual Perceptual Skill
Muscle Testing

Diagnosis - Choose one best answer.

Kate is a two year old in a self-centered classroom of six children. At 10 months she was diagnosed with profound hearing loss and has been in educational programs since 1 year. Her strengths include fine motor manipulation and basic counting skills. Concerns are significant language delay, difficulty with gross motor balance and coordination, and attending skills.

20. Diagnosis: (D)
21. Treatment Approach: (D or B)
22. Assessment: (C)

Mark is a 10 year old. He was born with a portion of his spinal cord outside the vertebral column and had surgical repair at 7 days. He has no sensation or motor function below the waist. He uses a wheelchair for mobility. Strengths include most academics, strength and coordination of arms, self care except transfers. Concerns are Mark's ability to participate in physical education and field trips with his class.

23. Diagnosis: (A)
24. Treatment Approach: (E)
25. Assessment: (E or D)

Ralph is a seven year old. He was born prematurely and at 3 months developed retrolental fibroplasia. He is in a 1st grade class at a special school. As an infant he cried frequently, did not want to be held, and had feeding problems. Strengths include language skills and self-care skills for dressing, feeding, and grooming. Concerns are Ralph's concept formation (e.g., categorization, same/different), fine motor manipulation, and reading and math performance.

26. Diagnosis: (D or C)
27. Treatment Approach: (B or C)
28. Assessment: (A)

Sally is 15 yrs old and attends a special school. Her strengths include her fine motor skills and independence with grooming and hygiene tasks. Her measured IQ is in the high 40's to low 50's. Areas of concern include her limited expressive and receptive language skills, clumsiness in gross motor skills, and inappropriate social behavior.

29. Diagnosis: (C)
30.* Treatment Approach: (D)
31. Assessment: (D)

Twelve year old Jan has generalized muscle spasticity. She is enrolled in sixth grade. Her strengths include normal vision and hearing, academics, communication using picture board, and ability to maneuver her wheelchair with her right hand activating a directional rod. Concerns include no independent motor function and different expectations once Jan enters junior high.

32. Diagnosis: (A)
33.* Treatment Approach: (D)
34. Assessment: (D)

George, at 10 is repeating 3rd grade. Psychological testing found his IQ to be in the mid-60's with corresponding adaptive behavior skills. His strengths include gross motor skills, especially with team sports. Concerns are in academics. His classroom teacher is currently modifying the regular curriculum and adapting instructional materials. He is slower at tasks than his peers, and does better with non-reading tasks. Fine motor skills are below average.

35. Diagnosis: (C or B)
36. Treatment Approach: (C)
37.* Assessment: (D)

Sam is an 8 year old second grader. He was retained in the 1st grade because academic difficulties and immaturity. His strengths include his verbal skills and his creativity. Areas of concern include his poor attention span, difficulty with handwriting, organization skills, and the subjects of reading and math.

38. Diagnosis: (C)
39. Treatment Approach: (B or C)
40. Assessment: (A)

Matthew is a 9 year old who attends a special class for children with adjustment difficulties. His strengths include his IQ scores, which are in the normal range. Areas of concern include his lack of cooperation, poor self concept and interaction skills with his peers and adults. He has been arrested twice for shoplifting.

41.* Diagnosis:
42.* Treatment Approach:
43.* Assessment:

Chad is a 6 year old who attends a self contained classroom. His strengths include his positive relationship with his family and his friendly personality. Areas of concern include his motor and cognitive skills. He can sit unsupported for a brief period of time before falling, cannot walk and communicates with a headshake for yes and no.

44. Diagnosis: (B)
45. Treatment Approach: (A or D)
46. Assessment: (C or B)

APPENDIX 7

SBS Inventory Part I & II

From Walker, Hill M. & Rankin, Richard. (1980). The SBS Inventory of Teacher Social Behavior Standards and Expectations (SBS Project).

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THE SBS INVENTORY
OF
TEACHER SOCIAL BEHAVIOR
STANDARDS AND EXPECTATIONS

BY
HILL M. WALKER, Ph. D. AND RICHARD RANKIN, Ph. D.
UNIVERSITY OF OREGON

Demographic Information

1. Teacher Name: ____________________

2. Sex: ( ) Male ( ) Female

3. Teaching Experience: __________ (# of years total) __________ (# of years in your current position)

4. Teaching Level: (CURRENT) ( ) Preschool ( ) Primary ( ) Intermediate ( ) Junior High ( ) High School ( ) Other

5. Type of Handicapped Children Worked With: ( ) None ( ) LD ( ) ED ( ) TMR ( ) EMR ( ) Deaf ( ) Blind ( ) Orthopedically Handicapped ( ) Multiply Handicapped ( ) Other (please specify) ____________________

6. Classroom Setting You Currently Teach In: ( ) Regular ( ) Resource ( ) Special ( ) Other (please specify) ____________________

Rater Instructions: This inventory consists of two sets of items descriptive of child social behavior in the classroom setting. The first set of items (Section I) describes child social behavior competencies and skills that are considered appropriate to the classroom setting. The second set (Section II) describes child behavior that is considered maladaptive, inappropriate and/or disruptive to the classroom setting. As a classroom teacher, you are asked to make one of three rating judgements about each item in Sections I and II of the inventory.

Instructions for Section I: For the items in this section, please indicate whether the behavior described is (a) critical, (b) desirable or (c) unimportant to a successful adjustment in your classroom by placing a check in the appropriate parentheses. The line to the left of each item will be used later.

Critical means that possession of the behavior is absolutely essential to a successful or satisfactory adjustment in your classroom

Desirable means that possession of the behavior is not essential or critical to a satisfactory classroom adjustment but is encouraged.

Unimportant means that you perceive the behavior as not being necessary or required for a satisfactory adjustment in your classroom.

Section I: Descriptions of ADAPTIVE, appropriate child behavior(s).

			Critical	Desirable	Unimportant
___	1.	Child is flexible and can adjust to different instructional situations, e.g. changes in routine, teachers, setting, etc.	( )	( )	( )
___	2.	Child listens while other children are speaking, e.g. as in circle or sharing time.	( )	( )	( )
	3.	Child communicates adequately, e.g. speaks normally and can be understood.	( )	( )	( )
___	4.	Child takes his/her turn.	( )	( )	( )
___	5.	Child uses academic tools correctly, e.g. paper, pencils, scissors, etc.	( )	( )	( )
___	6.	Child seeks teacher attention at appropriate times.	( )	( )	( )
___	7.	Child models or imitates the appropriate behavior of other children.	( )	( )	( )
___	8.	Child uses free time appropriately.	( )	( )	( )
___	9.	Child makes her/his assistance needs known in an appropriate manner, e.g. asks to go to the bathroom, raises hand when finished with work, asks for help with work, lets teacher know when sick or hurt.	( )	( )	( )

			Critical	Desirable	Unimportant
___	10.	Child listens carefully to teacher instructions and directions for assignments.	( )	( )	( )
___	11.	Child volunteers for classroom activities, e.g. assisting the teacher, reading aloud, classroom games, etc.	( )	( )	( )
___	12.	Child complies with teacher commands.	( )	( )	( )
___	13.	Child improves academic or social behavior in response to teacher feedback.	( )	( )	( )
___	14.	Child is considerate of the feelings of others, e.g. says or does things indicating an awareness of another's feelings.	( )	( )	( )
___	15.	Child produces work of acceptable quality given her/his skill level.	( )	( )	( )
___	16.	Child cooperates with peers in group activities or situations.	( )	( )	( )
___	17.	Child follows established classroom rules.	( )	( )	( )
___	18.	Child can have normal conversations with peers without becoming hostile or angry.	( )	( )	( )
___	19.	Child can work on projects in class with another student.	( )	( )	( )
___	20.	Child compliments peers regarding some attribute or behavior.	( )	( )	( )
___	21.	Child has independent study skills, e.g. can work adequately with minimal teacher support, attempts to solve a problem with schoolwork before asking for help.	( )	( )	( )

		Critical	Desirable	Unimportant
___ 22.	Child speaks to others in a tone of voice appropriate to the situation.	( )	( )	( )
___ 23.	Child answers or attempts to answer a question when called on by the teacher.	( )	( )	( )
___ 24.	Child copes with failure in an appropriate manner, e.g. doesn't give up on assignment or project involved in.	( )	( )	( )
___ 25.	Child behaves appropriately in non classroom settings (bathroom, hallways, lunchroom, playground), e.g. walks quietly, follows playground rules, etc.	( )	( )	( )
___ 26.	Child resolves peer conflicts or problems adequately on her/his own without requesting teacher assistance.	( )	( )	( )
___ 27.	Child can accept not getting his/her own way.	( )	( )	( )
___ 28.	Child attends consistently to assigned tasks.	( )	( )	( )
___ 29.	Child ignores the distractions or interruptions of other students during academic activities.	( )	( )	( )
___ 30.	Child knows when to ask permission of the teacher or other children.	( )	( )	( )
___ 31.	Child tolerates usual school frustrations adequately, e.g. delays, schedule changes, etc.	( )	( )	( )
___ 32.	Child can participate in and contribute to group instructional situations/activities.	( )	( )	( )
___ 33.	Child can follow teacher written instructions and directions.	( )	( )	( )

			Critical	Desirable	Unimportant
___	34.	Child avoids breaking classroom rule(s) even when encouraged by a peer.	( )	( )	( )
___	35.	Child has good work habits, e.g. makes efficient use of class time, is organized, stays on task, etc.	( )	( )	( )
___	36.	Child is honest with others, e.g. tells the truth, isn't deceptive.	( )	( )	( )
___	37.	Child responds to requests and directions promptly.	( )	( )	( )
___	38.	Child questions rules, directions or instructions that are not clear to her/him.	( )	( )	( )
___	39.	Child shares materials with others in a work situation.	( )	( )	( )
___	40.	Child makes productive use of time while waiting for teacher assistance, e. g. continues to work on problems that do not prove difficult.	( )	( )	( )
___	41.	Child raises hand before asking a question where appropriate.	( )	( )	( )
___	42.	Child completes tasks within prescribed time limits.	( )	( )	( )
___	43.	Child uses social conventions appropriately, e.g. says "thank you", "please", apologizes, etc.	( )	( )	( )
___	44.	Child observes rules governing movement around the room, e.g. when and how to move.	( )	( )	( )
___	45.	Child responds to teasing or name calling by ignoring, changing the subject or some other constructive means.	( )	( )	( )
___	46.	Child expresses anger appropriately e.g. reacts to situation without being violent or destructive.	( )	( )	( )

			Critical	Desirable	Unimportant
___	47.	Child initiates conversation with peers in informal situation.	( )	( )	( )
___	48.	Child uses classroom equipment and materials correctly.	( )	( )	( )
___	49.	Child uses playground equipment appropriately.	( )	( )	( )
___	50.	Child does seatwork assignments as directed.	( )	( )	( )
___	51.	Child sits up straight in seat during classroom instruction.	( )	( )	( )
___	52.	Child waits quietly for recognition before speaking out in class.	( )	( )	( )
___	53.	Child follows simple directions after hearing them once.	( )	( )	( )
___	54.	Child carries out decision(s) or plan formulated by the group.	( )	( )	( )
___	55.	Child can recognize and describe moods/feelings of others and self.	( )	( )	( )
___	56.	Child responds to conventional behavior management techniques.	( )	( )	( )

Instructions for Section II: For the items in this section, please indicate whether the behavior described is (a) unacceptable, (b) tolerated or (c) acceptable in your classroom.

Unacceptable means that you would not tolerate the behavior occurring in your classroom. Should an instance of the behavior occur, you would initiate active methods to (a) suppress or eliminate it and (b) prevent its future occurrence.

Tolerated means that while you will "put up" with the behavior in question (at least temporarily) you would prefer to see it reduced in frequency and/or replaced by an appropriate, incompatible behavior.

Acceptable means that the behavior presents no problems for you and you would not initiate procedures to decrease or eliminate it.

Section II: Descriptions of MALADAPTIVE, inappropriate child behavior(s).

			Unacceptable	Tolerated	Acceptable
___	1.	Child whines.	( )	( )	( )
___	2.	Child tests or challenges teacher imposed limits, e.g. classroom rules.	( )	( )	( )
___	3.	Child is easily distracted from the task or activity at hand.	( )	( )	( )
___	4.	Child has tantrums.	( )	( )	( )
___	5.	Child babbles to her/himself.	( )	( )	( )
___	6.	Child disturbs or disrupts the activities of others.	( )	( )	( )
___	7.	Child engages in stereotyped repetitive behavior, e.g. repeats the same response over and over in the same way such as pencil tapping, drumming fingers or playing with objects.	( )	( )	( )
___	8.	Child refuses to share.	( )	( )	( )
___	9.	Child engages in silly, attention getting behavior, e.g. makes unusual noises/gestures, imitates cartoon characters, etc.	( )	( )	( )
___	10.	Child lies.	( )	( )	( )
___	11.	Child is verbally aggressive with others, e.g. teases, taunts, engages in name calling.	( )	( )	( )
___	12.	Child manipulates other children and/or situations in order to get his/her own way.	( )	( )	( )
___	13.	Child refuses to obey teacher imposed classroom rules.	( )	( )	( )
___	14.	Child uses obscene language.	( )	( )	( )
___	15.	Child pouts or sulks.	( )	( )	( )

			Unacceptable	Tolerated	Acceptable
___	16.	Child ignores teacher warnings or reprimands.	( )	( )	( )
___	17.	Child is physically aggressive with others, e.g. hits, bites, chokes, holds.	( )	( )	( )
___	18.	Child cheats, e.g. copies work from others.	( )	( )	( )
___	19.	Child becomes visibly upset or angry when things do not go her/his way.	( )	( )	( )
___	20.	Child talks out of turn.	( )	( )	( )
___	21.	Child ignores the social initiations (overtures, advances, etc.) of other children.	( )	( )	( )
___	22.	Child damages others' property, e.g. academic materials, personal possessions, etc.	( )	( )	( )
___	23.	Child asks irrelevant questions, e.g. questions serve no functional purpose and are not task related.	( )	( )	( )
___	24.	Child reacts with defiance to instructions or commands.	( )	( )	( )
___	25.	Child steals.	( )	( )	( )
___	26.	Child does not follow specified rules of games and/or class activities.	( )	( )	( )
___	27.	Child obeys only when threatened with punishment.	( )	( )	( )
___	28.	Child refuses to play in games with other children.	( )	( )	( )
___	29.	Child behaves inappropriately in class when corrected, e.g. shouts back, defies the teacher, etc.	( )	( )	( )
___	30.	Child forces the submission of peers by being dominant, bossy and/or overbearing.	( )	( )	( )

		Unacceptable	Tolerated	Acceptable
___ 31.	Child starts activities but does not finish them.	( )	( )	( )
___ 32.	Child argues and must have the last word in verbal exchanges with peers and/or teacher.	( )	( )	( )
___ 33.	Child appears to be unmotivated, e.g. not interested in school work.	( )	( )	( )
___ 34.	Child makes lewd or obscene gestures.	( )	( )	( )
___ 35.	Child displays high levels of dependence, e.g. needs excessive amounts of assistance, feedback and/or supervision to complete simple tasks.	( )	( )	( )
___ 36.	Child does not respond when called upon.	( )	( )	( )
___ 37.	Child creates a disturbance during class activities, e.g. is excessively noisy, bothers other students, is out of seat, etc.	( )	( )	( )
___ 38.	Child is overly affectionate with other children and/or adults, e.g. touching, hugging, kissing.	( )	( )	( )
___ 39.	Child is excessively demanding, e.g. demands too much individual attention.	( )	( )	( )
___ 40.	Child is inexcusably late for the beginning of class activities.	( )	( )	( )
___ 41.	Child is seriously withdrawn, e.g. whenever possible avoids social contact with other children and/or adults.	( )	( )	( )

			Unacceptable	Tolerated	Acceptable
___	42.	Child interrupts the teacher when the teacher is engaged in a presentation or activity.	( )	( )	( )
___	43.	Child engages in inappropriate sexual behavior, e.g. masturbates, exposes self, etc.	( )	( )	( )
___	44.	Child is self abusive, e.g. biting, cutting or bruising self, head banging, etc.	( )	( )	( )
___	45.	Child wants to participate in playground activity in progress but is afraid to ask to join.	( )	( )	( )
___	46.	Child does not share toys and equipment in a play situation.	( )	( )	( )
___	47.	Child does not follow and/or give into necessary rules of games and class activities.	( )	( )	( )
___	48.	Child does not correct mistakes when teacher indicates there are errors.	( )	( )	( )
___	49.	Child does not ask permission to use others' property.	( )	( )	( )
___	50.	Child's remarks or questions are irrelevant to classroom discussions.	( )	( )	( )
___	51.	Child reacts negatively to assigned school work, e.g. complains, sulks, refuses to start task.	( )	( )	( )

APPENDIX 8

Student Fieldwork Evaluations

OCCUPATIONAL THERAPY Name: ____________________

STUDENT EVALUATION OF FIELDWORK EXPERIENCE

PART I: IDENTIFYING INFORMATION

NAME AND ADDRESS OF FACILITY: ____

____

____

DATES OF ASSIGNMENT: From ____________________ To ____________________

Full time ________ Part time ________

ORDER OF FIELDWORK: First _____ Second ____ Third ____ Fourth ___

TYPE OF FIELDWORK: ____

AGE GROUPS TREATED: (Indicate the approximate number of patients treated in each grouping)

0 - 3 yrs ___, 3 - 6 yrs ___, 6 - 12 yrs ___, 12 - 19 yrs ___,

20 - 40 yrs ___, 41 - 60 yrs ___, 61 - 80 yrs ___, 81 and above ___

PART II: STRUCTURE OF FIELDWORK EXPERIENCE

A. STUDENT ORIENTATION

1. Indicate your view of the orientation provided by checking "yes" (Y) or "no" (N) regarding the following factors.

ADEQ = Orientation was ADEQUATE in content.
ORG = Orientation was ORGANIZED in approach.
TIME = Orientation was TIMELY in presentation.

	ADEQ		ORG		TIME	
	Y	N	Y	N	Y	N
a. APPROPRIATE INTRODUCTIONS						
b. PHYSICAL FACILITIES						
c. ORGANIZATIONAL STRUCTURE						
d. FACILITY ADMINISTRATION						
e. FACILITY/DEPARTMENT PHILOSOPHY						
f. OCCUPATIONAL THERAPY SERVICES						
g. DEPARTMENT TREATMENT FRAME(S) OF REFERENCE						
h. POLICIES AND PROCEDURES						
i. DEPARTMENTAL DOCUMENTATION						
j. FIELDWORK OBJECTIVES AND REQUIREMENTS						
k. STUDENT SUPERVISION						
l. ANCILLARY SERVICES						
m. COMMUNITY FACILITIES						
n. SAFETY AND EMERGENCY PROCEDURES						
o. OTHER specify						

Note any changes you would recommend for orientation to this fieldwork setting:

B WRITTEN AND/OR ORAL ASSIGNMENTS

1. -Indicate the number of written and oral assignments that you did.
-Indicate their value to your learning experience by circling the appropriate number, #1 being the least valuable and #5 being the most valuable.

	NUMBER WRITTEN	NUMBER ORAL	EDUCATIONAL VALUE				
			Least				Most
a. PATIENT EVALUATIONS			1	2	3	4	5
b. TREATMENT PLANS			1	2	3	4	5
c. CASE STUDY			1	2	3	4	5
d. PROGRESS NOTES			1	2	3	4	5
e. PAPER			1	2	3	4	5
f. INSERVICES PRESENTATIONS			1	2	3	4	5
g. TEAM MEETING PRESENTATIONS			1	2	3	4	5
h. OTHER: Specify 1.			1	2	3	4	5
2.			1	2	3	4	5

2. Note any changes you would recommend for student assignments according to their educational value for you.

C. PATIENTS OR CLIENTS

1. List the specific diagnoses treated and the number of patients you treated with each listed diagnosis. (Please do not abbreviate.)

DIAGNOSIS / CONDITION	TOTAL # TREATED	DIAGNOSIS/ CONDITION	TOTAL # TREATED
a.		f.	
b.		g.	
c.		h.	
d.		i.	
e.		j.	

2. List the specific evaluation or assessment tools that you used in assessing patients. (Please do not abbreviate.)

____

____

3. Were you responsible for treatment groups? Yes ______ No ______ If yes, list the type of treatment groups, frequency of group treatment, whether you were leader (L) or co-leader (C), and the number (#) of patients in the groups.

GROUP	FREQUENCY	L/C	#	Group	FREQUENCY	L/C	#

4. Primary treatment approaches utilized: ______________________________

____

PART III: SUPERVISION

Name/s and title/s of Supervisor/s ______________________________

____

A. Frequency of supervisory meetings formal and informal: ______________

____

B. For each item circle the number that was characteristic of your supervisor and the type of supervision received. (Code for different supervisors).

	ITEM	RARELY		CONSISTENTLY		
1	PRESENTED CLEAR EXPLANATIONS AND EXPECTATIONS	1	2	3	4	5
2	REVIEWED WRITTEN WORK IN A TIMELY MANNER	1	2	3	4	5
3	ACCOMODATED TO STUDENT'S INDIVIDUAL NEEDS	1	2	3	4	5
4	ADJUSTED WORK LOAD TO FACILITATE STUDENT'S PROFESSIONAL GROWTH	1	2	3	4	5
5	PROVIDED SUPERVISION AS NEEDED	1	2	3	4	5
6	PROVIDED FEEDBACK IN A TIMELY MANNER	1	2	3	4	5
7	PROVIDED FEEDBACK ON STUDENT'S STRENGTHS	1	2	3	4	5
8	PROVIDED CONSTRUCTIVE FEEDBACK ON STUDENT'S WEAKNESSES	1	2	3	4	5
9	GAVE SUGGESTIONS ON METHODS TO IMPROVE SKILLS OR PERFORMANCE . . .	1	2	3	4	5
10	FACILITATED STUDENT'S PROBLEM SOLVING SKILLS	1	2	3	4	5
11	ENCOURAGED SELF-DIRECTED LEARNING AS APPROPRIATE . . .	1	2	3	4	5
12	ENCOURAGED STUDENT TO PROVIDE FEEDBACK TO SUPERVISORS .	1	2	3	4	5
13	SEEMED APPROACHABLE & INTERESTED IN STUDENTS	1	2	3	4	5
14	SHOWED OBJECTIVITY & FAIRNESS WITH STUDENTS	1	2	3	4	5
15	PROVIDED A POSITIVE ROLE-MODEL OF PROFESSIONAL BEHAVIOR	1	2	3	4	5
16	MADE ME FEEL COMFORTABLE & PART OF DEPARTMENT	1	2	3	4	5

C Note any recommendations that you have that would improve the student supervision and guidance. ______________________________

Part IV: PROFESSIONAL RELATIONSHIPS

A For each item circle the number that seems descriptive of your experiences, #1 being rarely and #5 being consistently.

	ITEM	RARELY				CONSISTENTLY
1	INTERDISCIPLINARY APPROACH TO CARE	1	2	3	4	5
2	YOU INTERACTED WITH OTHER DISCIPLINES IN PLANNING. PATIENT TREATMENT	1	2	3	4	5
3	APPROPRIATE THERAPEUTIC RELATIONSHIPS MODELED. FOR YOU BY OCCUPATIONAL THERAPY STAFF	1	2	3	4	5
4	INFORMED OF ADDITIONAL EDUCATIONAL OPPORTUNITIES AVAILABLE AT FACILITY OR IN THE COMMUNITY	1	2	3	4	5
5	YOU TOOK ADVANTAGE OF THE ADDITIONAL EDUCATIONAL OPPORTUNITIES	1	2	3	4	5
6	PROVIDED WITH OPPORTUNITY TO EXPAND INTERDISCIPLINARY KNOWLEDGE	1	2	3	4	5
7	PROVIDED WITH OPPORTUNITY TO NETWORK WITH OTHER HEALTH PROFESSIONALS	1	2	3	4	5
8	PROVIDED WITH OPPORTUNITY TO NETWORK WITH RELATED AGENCIES	1	2	3	4	5
9	PROVIDED WITH OPPORTUNITY TO EXPAND KNOWLEDGE OF COMMUNITY RESOURCES	1	2	3	4	5

B If applicable, what other students were doing fieldwork during your placement, and how did this affect your learning experiences?

C Would you recommend this center as a student fieldwork experience?

Yes _____ No _____ Why? ______________________________

PART V: HOUSING, ECT.

Please comment on availability of housing and other pertinent information for students who will be moving to the area.

Part V: Academic Preparation - University of Kansas

Name of Fieldwork Center: ______________________________

Type of Fieldwork: ______________________________

Order of Fieldwork Experience: _____1st, _____2nd, _____3rd

Please rate each group of the following content areas as to the adequacy of preparation you received for this fieldwork according to the following scale:

	1	2	3	4	5
Preparation:	Poor	Fair	Adequate	Good	Excellent

Also rate each group of content areas according to the degree of utilization or application at this fieldwork based on the following scale

	1	2	3	4
Utilization:	Rarely	Occasionally	Frequently	Consistently

RATING FOR PREP/UTIL	CONTENT/SUBJECTS	Please make specific comments on each section
	Theory Normal Growth & Development (OT205, OT255) Generic OT Theories (OT 201) Frames of Reference (OT301, OT351, OT365, OT 411, OT 421)	
	Science Human Anatomy (Anat 388) Neuroanatomy (OT 345) Kinesiology (OT 335) Neurophysiology (Pslg 398)	
	Abnormal Conditions Orientation to the Medical Setting (OT211) Psychiatric Conditions (OT 350) Clinical Conditions (OT 375) Developmental Disabilities (OT 365)	
	Documentation	
	Activity Analysis	
	Therapist Practice Skills/Application Generic skills-observing, interviewing, analyzing activities, leading groups, teaching, etc. (OT201, OT203, OT213, OT256) Applying skills to normal populations, e.g. administering standardized assessments (OT 205, OT 253, OT 255, OT 335) Applying skills to normal populations, e.g. adapting activities, transfers, splinting (OT 301, OT 303, OT 351) Selecting and applying specific evaluation and treatment procedures to abnormal conditions (OT365, OT411, OT413, OT421, OT423)	
	Professional Commitment Professional Ethics & Behavior (OT201, OT353) Management (OT 425) Research (OT 440, OT 353, OT 445)	

This information may be utilized for Program Evaluation. Please add any general recommendations for changes in the Kansas University Medical Center Occupational Therapy Curriculum to the back of this form. A list of course titles and numbers is also on the back of this form for your reference.

6. Additional Comments:

KANSAS UNIVERSITY MEDICAL CENTER
OCCUPATIONAL THERAPY EDUCATION (ACADEMIC PROGRAM)

Semester 1 O.T. Fall	Semester 2 O.T. Spring	Semester 3 O.T. Fall	Semester 4 O.T. Spring
OT 201 Con. & Skills	OT 253 FW I: Adult Adaptation	OT 351 Theory & Practice	OT 411 Psychosoc. Dysfunction: Theory & Practice
OT 203 FW I: Early Dev.	OT 255 Dev. Life Tasks II	OT 353 Prof. Dev. Sem.	OT 413 FW I: Psychosoc Dys.
OT 205 Dev. Life Tasks I	OT 301 Con. & Skills III	OT 375 Clin. Conditions	OT 421 Physical Dysf.: Theory & Practice
ANAT 388 Anatomy	OT 345 Neurology	PSLG 398 Neurophys.	OT 423 FW I: Phy. Dysf.
OT 211 Orient. to Medical Setting	OT 350 Clinical Psych.	OT 303 FW I: Adapted Occupation	OT 435 Service Mgmt and Prof. Trends
OT 213 Woodworking	OT 335 Kinesiology	OT 256 Activity Analysis	OT 445 Advanced Topics
		OT 440 Research	OT 365 Developmental Dis.

11/89

Note any changes you would recommend to the university program.

____

____

____

____

_______________________________ __________
Student's Signature date

_______________________________ __________
Supervisor's Signature date

Gretchen M. Schmalz, Ed.D., OTR
Ted James, MA, OTR
Caroline Polliard, MA, OTR
Kimberly A. Vogel, Ed. D., OTR

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10/88

APPENDIX 9

Fieldwork Performance Report

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THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION, INC.
FIELDWORK EVALUATION FOR THE OCCUPATIONAL THERAPIST

Ms./Mr. ____
(Last) (First) (Middle) (Maiden)

Social Security Number: ______________________________

College or University: ______________________________

Facility name and address: Name ______________________________

____

Address ______________________________

City ____________ State ________ Zip ________

Type of Fieldwork: ______________________________

Dates of placement: From ____________ 19____: To ____________ 19____

Number of weeks or hours completed: ______________________________

RATING SUMMARY

Sub-Scores	Performance	Judgment	Attitude
Assessment (A)	☐	☐	☐
Planning (B)	☐	☐	☐
Treatment (C)	☐	☐	☐
Problem solving (D)	☐	☐	☐
Administration/ Professionalism (E)	☐	☐	☐
TOTAL	☐	☐	☐
	Sum of A-E	Sum of 1-51	Sum of 1-51

Comments:

I have read this report

____
Signature of Student

____
Date

____
Signature of Rater

____
Position

Number of persons contributing to this report ____________

This instrument is a revision of the Field Work Performance Report (FWPR) and is produced by a committee of The American Occupational Therapy Association, Inc., in response to Resolution 584-82 of the Representative Assembly.

DIRECTIONS FOR RATING:

This instrument consists of a listing of tasks performed by occupational therapists. The purpose is to assess entry-level competence of the occupational therapy student in practice. It is to be used at the completion of a Level II fieldwork experience. Successful completion of fieldwork is a necessary prerequisite for taking the national certification examination.

The tasks are listed as "Items" and include a total of 51. Each item is rated on three different scales: Performance, Judgment, and Attitude. Definitions of the scales are given at the top of each page. The rating scales should be carefully studied prior to using this instrument. A rating must be made for each item and a value entered on the form where indicated. On those items with a corresponding blackened box no score is needed.

DIRECTIONS FOR SCORING:

Scoring is to be completed separately for the Performance, Judgment, and Attitude scales. The scoring is a 5 point scale with a range of 1 (poor) to 5 (excellent). Scores are arrived at by adding the individual ratings for each item and totaling each column on each page. The page totals are recorded on the Rating Summary on page 1. The Performance scale contains sub-scores and a total score while the Judgment and Attitude scales have only total scores. (The small boxes for the Judgment and Attitude scales are for the convenience of the rater in computation.)

The scores for Performance, Judgment, and Attitude constitute the final ratings. No overall total score is calculated. Criterion score is the recommended minimum passing score.

Use of the instrument at midterm—see last page.

SCORES:

	Criterion Scores		Maximum Score Possible
Performance	125	or higher	230
Judgment	132	or higher	240
Attitude	146	or higher	255

PERFORMANCE SUB-CATEGORY DEFINITIONS:

A. **Assessment:** the process of obtaining, interpreting, and documenting the data necessary to make initial and subsequent treatment decisions.

B. **Planning:** the identification of goals, and methods to achieve those goals, in initial and subsequent treatment.

C. **Treatment:** the use of specific activities or methods which are employed to develop, maintain, improve, restore, or maximize function and compensate for dysfunction.

D. **Problem Solving:** the skill and performance of identifying and organizing solutions to difficulties.

E. **Administration/Professionalism:** skills and attitudes which allow the individual to participate in the occupational therapy facility and service.

Sub-scores of Performance may be used to identify specific areas of strength or weakness. The Judgment and Attitude categories present an overall rating.

264

Rating Scales

Performance	Judgment	Attitude
Indicate the level of quality with which the student **performs** the task. Do not consider the attitude with which the student performs the task.	Indicate the extent to which the student demonstrates an understanding of the **rationale and justification** for his or her performance of the task.	Indicate the degree to which the student exhibits **professional behaviors and attitudes** during the performance of the task. Do not consider the quality with which the student performs the task.
1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent

ITEMS	PERFORMANCE	JUDGMENT	ATTITUDE
1. Gathers necessary information before assessing the patient.	☐	☐	☐
2. Selects relevant areas to assess.	☐	☐	☐
3. Selects the correct methods to assess the relevant areas.	☐	☐	☐
4. Obtains complete information from staff, family members, patient, and records.	☐	☐	☐
5. Administers the assessment procedures according to standardized or recommended techniques.	☐	☐	☐
6. Adapts assessment method when usual procedures are not practical.	☐	☐	☐
7. Interprets assessment data accurately.	☐	☐	☐
8. Reports the results of assessment and reassessment(s) accurately and completely.	☐	☐	☐
9. Reassesses the patient's programs and progress at regular intervals.	■	☐	☐
10. Establishes relevant and attainable short term goals which reflect the assessment data.	☐	☐	☐
11. Documents and reports the treatment plan.	☐	☐	☐
12. Documents and reports treatment.	☐	☐	☐
Sub-Score A (sum of 1–12)	☐	☐	☐

Rating Scales

Performance	Judgment	Attitude
Indicate the level of quality with which the student **performs** the task. Do not consider the attitude with which the student performs the task.	Indicate the extent to which the student demonstrates an understanding of the **rationale and justification** for his or her performance of the task.	Indicate the degree to which the student exhibits **professional behaviors and attitudes** during the performance of the task. Do not consider the quality with which the student performs the task.
1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent

ITEMS	PERFORMANCE	JUDGMENT	ATTITUDE
13. Establishes relevant and attainable long term goals which reflect the assessment data.	☐	☐	☐
14. Collaborates with the patient in establishing goals.	☐	☐	☐
15. Collaborates with other practitioners to establish overall goals for patients.	☐	☐	☐
16. Contributes to discussions at case conferences, rounds, inservices, staff, and other pertinent meetings.	☐	■	☐
17. Establishes treatment priorities with patient, family, and significant others.	☐	☐	☐
18. Reviews progress with patient, family, and significant others at regular intervals.	☐	☐	☐
19. Orients and instructs family, significant others, and staff in activities which support the treatment programs.	☐	☐	☐
20. Develops and documents discharge and follow-up programs in accordance with patient's probable discharge environment.	☐	☐	☐
21. Collaborates with patient, family, significant others, and staff to formulate discharge and follow-up plans.	☐	☐	☐
22. Terminates treatment when patient has received maximum benefit from services.	☐	☐	☐
Sub-Score B (sum of 13-22) ☐ ←		☐	☐

Rating Scales

Performance	Judgment	Attitude
Indicate the level of quality with which the student **performs the task.** Do not consider the attitude with which the student performs the task.	Indicate the extent to which the student demonstrates an understanding of the **rationale and justification** for his or her performance of the task.	Indicate the degree to which the student **exhibits professional behaviors and attitudes** during the performance of the task. Do not consider the quality with which the student performs the task.
1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent

ITEMS	PERFORMANCE	JUDGMENT	ATTITUDE
23. Prepares the patient for initial and ongoing treatment.	☐	☐	☐
24. Presents assessment purposes and procedures to patient, family and significant others in a manner consistent with their level of understanding.	☐	☐	☐
25. Explains the steps of the activity at the patient's level of understanding.	☐	☐	☐
26. Establishes and maintains a therapeutic relationship with the patient.	☐	☐	☐
27. Maintains established treatment plan.	■	■	☐
28. Creates an environment which maximizes patient's responses.	☐	☐	☐
29. Adheres to treatment precautions and contraindications.	☐	☐	☐
30. Responds to changes in the patient's physical and emotional status during administration of the assessment procedures.	☐	☐	☐
31. Intervenes, when necessary, at signs of fatigue or frustration.	☐	☐	☐
32. Uses praise or other reinforcers to elicit desired behavior.	☐	☐	☐
33. Sets necessary limits in response to undesirable physical or social behavior.	☐	☐	☐
34. Incorporates prevention related activities in treatment.	■	☐	☐
Sub-Score C (sum of 23-34) ☐ ←		☐	☐

Rating Scales

Performance	Judgment	Attitude
Indicate the level of quality with which the student **performs** the task. Do not consider the attitude with which the student performs the task.	Indicate the extent to which the student demonstrates an understanding of the **rationale and justification** for his or her performance of the task.	Indicate the degree to which the student exhibits **professional behaviors and attitudes** during the performance of the task. Do not consider the quality with which the student performs the task.
1. Poor	1. Poor	1. Poor
2. Fair	2. Fair	2. Fair
3. Good	3. Good	3. Good
4. Very Good	4. Very Good	4. Very Good
5. Excellent	5. Excellent	5. Excellent

ITEMS	PERFORMANCE	JUDGMENT	ATTITUDE
35. Plans treatment based upon an accurate analysis of activities.	☐	☐	☐
36. Determines the logical sequences of treatment activities to attain the established goals.	☐	☐	☐
37. Selects treatment activities that demonstrate an understanding of occupational therapy theory.	☐	☐	☐
38. Modifies goals as patient's condition or response to treatment changes.	☐	☐	☐
39. Uses purposeful activities to maximize patient performance.	☐	☐	☐
40. Uses a variety of possible strategies for achieving treatment goals.	☐	☐	☐
41. Adapts treatment activities, when necessary, to reach desired goals.	☐	☐	☐
42. Demonstrates problem-solving skills in patient treatment.	☐	☐	☐
Sub-Score D (sum of 35–42) ☐ ←		☐	☐

Rating Scales

Performance	Judgment	Attitude
Indicate the level of quality with which the student **performs the task.** Do not consider the attitude with which the student performs the task.	Indicate the extent to which the student demonstrates an understanding of the **rationale and justification** for his or her performance of the task.	Indicate the degree to which the student exhibits **professional behaviors and attitudes** during the performance of the task. Do not consider the quality with which the student performs the task.
1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent	1. Poor 2. Fair 3. Good 4. Very Good 5. Excellent

ITEMS	PERFORMANCE	JUDGMENT	ATTITUDE
43. Manages time effectively.	☐	☐	☐
44. Adjusts priorities according to the needs of the program, department, and others.	☐	☐	☐
45. Complies with the institution's policies and procedures.	☐	☐	☐
46. Participates responsibly in the supervisory relationship.	☐	☐	☐
47. Adjusts to change and modifies own behavior according to the demands of the situation.	☐	☐	☐
48. Assumes responsibility for professional behavior and growth.	☐	☐	☐
49. Demonstrates an understanding of professional standards and code of ethics.	☐	☐	☐
50. Maintains work area, equipment, and supplies in a manner conducive to efficiency and safety.	■	☐	☐
51. Demonstrates an understanding of the implications of treatment costs and financial support on occupational therapy services.	■	■	☐
Sub-Score E (sum of 43-51) ☐		☐	☐
TOTAL SCORE ☐ Sum of A-E		☐	☐

Place total scores on front sheet.

MIDTERM USE

This portion of the document was written after the Fieldwork Evaluation had been approved by the Commission on Education and the Representative Assembly in April 1986. It is presented in response to the many concerns about evaluating students at midterm. It will be voted on at a later date.

The Fieldwork Evaluation for the Occupational Therapist is an assessment tool for evaluating student competence at the completion of each Level II fieldwork experience. It may also be used at midterm to assess the student's progress on all three scales with the tasks listed in the evaluation. When used at midterm, the recommended ratings for each of the 51 tasks are as follows:

Satisfactory Plus (S+)
Satisfactory (S)
Unsatisfactory (U)

A rating of Not Observed (NO) may be used at midterm if the task is one to which the student will not be exposed until the second half of the affiliation. When NO is used, task expectations for the end point behavior need to be identified.

It is helpful for students to assess their progress independently. This provides an opportunity for self-evaluation and for, identification of the congruence or incongruence of student and supervisor perceptions of competence. Therefore, the student and supervisor should complete evaluation forms prior to the midterm review session.

During the midterm review process, the student and supervisor should collaboratively develop a plan which would enable the student to achieve entry level competence by the end of the fieldwork experience. This plan should include specific objectives and enabling activities to be used by the student and supervisor in order to achieve the competence desired.

If, at any point in the fieldwork experience, a student exhibits unsatisfactory behavior in a substantial number of tasks and/or if the student's potential for achieving entry level competence by the end of the affiliation is in question, the supervisor must contact the Fieldwork Coordinator to discuss action.

January 1987

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THE AMERICAN OCCUPATIONAL THERAPY ASSOCIATION, INC.

STUDENT EVALUATION OF FIELD WORK EXPERIENCE

This form is important feedback for your field work experience supervisor, your faculty and other students at your school. The feedback provides information to change and/or commend the field work and academic programs. Please make concrete suggestions.

Part I. IDENTIFYING INFORMATION

1. Name and address of facility ______________________________

____

____

2. Dates of assignment: From ____________ To ____________

Full-time ____________ Part-time ____________

3. Order of field work (circle): First Second Third Fourth

4. Type of field work (circle one or more):

Physical Disability Psychosocial Disability General Medicine and Surgery

Pediatrics Adolescent Adult Geriatrics Day Care Center School

Community Agency In-Patient Acute Convalescent Chronic

Other ______________________.

5. Type of experience (circle): Prevention Remediation Health Maintenance

Daily Life Tasks Vocational Adjustment

6. Living accommodations: (include type, cost, lease, location, condition)

Part II. STRUCTURE OF OCCUPATIONAL THERAPY PROGRAM

A. Orientation

1. Please use one of the following letters to describe how you were oriented to the following aspects of the program:

   a. orientation was provided, well organized and planned
   b. orientation was provided, but disorganized
   c. orientation was provided, but too late
   d, orientation was not provided

_____ Physical facilities at center

_____ Organization and administration of the facility

_____ Occupational therapy services offered at the center

_____ Treatment orientation and method of approach of Occupational Therapy Department

_____ Philosophy of facility

_____ Behavioral objectives of field work established by supervisor and student

_____ Format of Supervision

_____ Occupational Therapy Department Records

_____ Orientation to other departments; library

_____ Orientation to facilities in the community

_____ Emergency procedures

2. State what you would add, change, or delete from the orientation phase either in content or timing.

B. Written and Oral Assignments

1. Indicate the type and amount of written and/or oral work required. List those individuals present for oral reports.

	Written	Oral	Those Present
Patient evaluations	_____	_____	_____
Treatment plans	_____	_____	_____
Case study	_____	_____	_____
Progress notes	_____	_____	_____
Note book	_____	_____	_____
Paper	_____	_____	_____
Other	_____	_____	_____

2. What specific changes would you make in the amount or format of these assignments according to their value to your learning experience?

C. Patients/Clients

1. Describe the patient/client population for whom you were responsible. State diagnostic categories and number of clients if applicable.

2. For what kinds of groups were you responsible? How many patients/clients were in each group?

3. List the types of evaluations and/or tests you used in assessing patients/clients.

Part III. SUPERVISION

A. Structure

1. Was there a(n): (check one or more)

___ on site OTR supervisor
___ faculty member supervisor
___ OTR supervisor in the community
___ other (teachers, social workers, etc.) ______________________

2. State the frequency of supervision meetings. Was this sufficient?

B. Guidance

1. What method was used to review written and oral work, patient/client interaction and treatment? Who determined this method?

B. Guidance (continued)

2. Did you receive, from your supervisor, an evaluation of your strengths and weaknesses as a therapist? Did you receive specific suggestions to improve your skills as a therapist? Please explain.

3. Was the amount of responsibility that you were given for patient/client care adjusted to your professional growth? By the end of your field work experience, did you feel your workload was comparable to a beginning staff therapist? Explain.

4. Did you participate in supervising others?

C. Recommendations

1. Could you suggest any alternative and/or additional methods to improve the supervision and guidance?

Part IV. PROFESSIONAL RELATIONSHIPS

1. Was there an interdisciplinary approach toward patient/client care?

How did this affect communication channels between occupational therapy and other disciplines?

How did this affect the treatment of patients?

2. Did you plan or conduct treatment for the patient/client with other professionals? If so, please list the other professionals.

3. Which professionals were role models for you in patient-therapist relationships?

4. List the schools and academic levels of students present during your field work experience.

5. Comment on how the presence of other students affected your field work.

Part V. ACADEMIC PREPARATION

1. In what way did your occupational therapy theory courses prepare you for this field work experience. List each course separately and give specific reasons. (Were any O.T. courses not beneficial?)

What additional information did you need?

2. In what way did your basic science courses prepare you for this field work experience? List each course separately and give specific reasons. (Were any O.T. courses not beneficial?)

What additional information did you need?

3. Did you find correlation between theories and concepts learned at school and their practical application at this center? Give examples of this type of correlation.

Part VI. SUMMARY

1. Were you made aware of the opportunities available in the field work experience?

2. Did you take advantage of these opportunities?

3. Apart from the responsibilities specifically assigned to you, did you take any initiative to increase your learning experiences? Please explain.

4. In summary, what recommended changes would you make in the field work program?

5. In summary, what recommended changes would you make in the University program?

6. Would you recommend this center as a student field work experience? Why?

Part VII. ADDITIONAL COMMENTS

Please feel free to add any further comments, descriptions or information concerning your field work at this center. (Please use another sheet if needed for your comments.)

(Signature of Student)	(Signature of Supervisor)
(College or University)	(Date)

COUNCIL ON EDUCATION ANNUAL MEETING
OCTOBER, 1975

APPENDIX 10

Teacher Climate Control Questionnaire

From Kaufman, M., Agard, J. & Semmel, M. (1985). Mainstreaming: Learners and Their Environment. Cambridge, MA: Brookline Books. Used with permission.

TEACHER CLIMATE CONTROL QUESTIONNAIRE
Factors and Items

1	2	3	4	5	Factor I: Cooperation/Diversification
					In my class the children like to work together on assignments and projects.
					The children in my class help me make plans for the day.
					In my class I use many library books and reference materials in addition to textbooks.
					Students are encouraged to explore new activities independently.
					The children in my classroom have permission to move their seats together into groups in order to work together.
					Children try to help each other with their work.
					Students are required to test their hypotheses with experiments.
					The class actively participates in discussion.
					The class learning materials include lots of materials I have developed.
					My class program includes use of the neighborhood resources.
					The class learning materials include materials developed or supplied by the children.
					We have a lot of fun in my class.
					I occasionally allow the children in my class to manage themselves.
					Children use "books" written by their classmates as part of their reading and reference materials.
					Most members of the class aren't interested in what the class does.
					The children look at and discuss each other's work.
					Children are permitted to use most materials in the class without asking permission.
					Most students cooperate rather than compete with one another.
					Decisions affecting the class tend to be made democratically.

1	2	3	4	5	Factor II: Friction
					Some children in my room don't like the other children in the room.
					Certain students impose their wishes on the whole class.
					There is constant bickering and fighting among the children in my class.
					There are some children who are not happy in my class.
					The work of the class is frequently interrupted when some students have nothing to do.
					There are periods of confusion when the class changes from one activity to another.
					Most of the children in my room do not cooperate well with each other.
					There are a few children with whom I seem to have more casual communications.
					Some class members feel rushed to finish their work.
					Certain students work only with their close friends.
					In my class I have a few favorite children who are granted special privileges.
					Certain children in my class get their own way.
					The children enjoy the class activities

1 = strongly disagree
2 = disagree
3 = neutral
4 = agree
5 = strongly agree

1	2	3	4	5	Factor III: Rigidity/Control
					I ask that the children not talk when they are supposed to be working.
					Children are not supposed to move about the room without asking permission.
					I make sure children use materials only as instructed.
					I base my instructions on curriculum guides or the textbooks for the grade level I teach.
					The children in my class ask permission before doing things like sharpening their pencils.
					I plan and schedule all the children's activities through the day.
					The instructional groups formed in the fall are seldom changed.
					Only the good students are given extra projects.

1	2	3	4	5	Factor IV: Individualization
					I make classroom work assignments based on each individual child's needs.
					I often spend extra time with children who have individual learning problems.
					I spend lots of time each day working on academic subjects with individual children.
					All children are expected to do the same assignments.
					Many different projects and activities go on in my class simultaneously.
					I require all the children to take the same tests over the material presented to the whole class.
					I keep records on each child's day-to-day educational activites for use in evaluating his or her development.
					Children work directly with manipulative materials.
					The class activities are well organized and efficient.
					When children finish their class assignments, they know what to do next.
					The class has plenty of time to cover the assigned amount of work.
					The children in my class have some free time during the day.
					Within the classroom, there is a wide enough diversity of books to meet each child's needs and interests.

1	2	3	4	5	Factor V: Difficulty
					Most students in the class find the work hard to do.
					The class has difficulty keeping up with the assigned curriculum.
					Many children in the class do not understand what work assignments they should be doing.
					When the children start a new assignment, they are often confused.
					Most of the children can do their work without help.
					All the students know how to do the work assigned in my class.
					Most children are deeply involved in what they are doing throughout the day.

Taken from: Mainstreaming: Learners and Their Environment. M. Kaufman, J.A., Agard & M.I. Semmel, Brookline Books, Cambridge, MA 1985.

APPENDIX 11

Teacher Educational Attitude Questionnaire
Parent Educational Attitude Questionaire

From Kaufman, M., Agard, J. & Semmel, M. (1985). Mainstreaming: Learners and Their Environment. Cambridge, MA: Brookline Books. Used with permission.

TEACHER EDUCATIONAL ATTITUDE QUESTIONNAIRE
Scales and Items

1	2	3	4	5	Scale I: Traditional Authority
					The small gains in learning which result from all the educational innovations aren't really worth all the trouble and expense of making the changes.
					The public school is sacrificing too much of our cultural heritage in its preoccupation with life adjustment and group living.
					I dislike having to change my class plan in the middle of an undertaking.
					Subject matter and skills are difficult to teach, therefore, the content of the curriculum must take precedence over the children's experiences.
					Public schools should become more involved in implementing innovative practices in education.
					It is frequently necessary for a teacher to demonstrate her authority.
					Schools of today are neglecting the basic academic subjects.
					A child shouldn't tell a teacher that she's wrong even if she is.
					I do not enjoy having to adapt myself to new and unusual situations that occur in the classroom.
					One of the big difficulties with schools today is that discipline is often sacrificed for the sake of freedom.
					A child who doesn't show respect for his teacher won't learn much from her.
					The reason that most innovations are dropped is that when the newness wears off, the old ways are found to be the best after all.
					It may be alright to have parents visit the class once in a while, but it interferes with the teacher's work just the same.
					What is needed in the classroom is a revival of respect for the teacher.
					Good relations with parents may be important, but discussing their children's work with them is generally ineffective.
					Teachers should exercise more authority over their students than they do.
					Educational authorities have been negligent in allowing new materials and methods to interfere with the success of traditional approaches.

1 = strongly disagree
2 = disagree
3 = neutral
4 = agree
5 = strongly agree

1	2	3	4	5	Scale II: Professional Satisfaction
					As far as I know, the other teachers think I am a good teacher.
					The stress and strain resulting from teaching makes teaching undesirable for me.
					Teaching gives me a great deal of personal satisfaction.
					I am at a disadvantage professionally because other teachers are better prepared to teach than I am.
					Teaching enables me to make my greatest contribution to society.
					I love to teach.
					I feel sucessful in my present position as a teacher.
					As a teacher, I think I am as competent as most other teachers.

1	2	3	4	5	Scale III: Teacher Cohesiveness
					Experienced faculty members are supportive and helpful toward new and younger members in my school.
					The teachers at this school share educational ideas and techniques with each other.
					The teachers at this school don't seem to be able to work well together.
					The teachers in our school cooperate with each other to improve education instruction in the school.

Taken from: Mainstreaming: Learners and Their Environment, M. Kaufman, J.A. Agard & M.I. Semmel, Brookline Books, Cambridge, MA 1985.

PARENT EDUCATIONAL ATTITUDE QUESTIONNAIRE
Scales and Items

Scale I: Traditional Authority

1	2	3	4	5	
					The small gains in learning which result from all the educational innovations aren't really worth all the trouble and expense of making the changes.
					The public school is sacrificing too much of our cultural heritage in its preoccupation with life adjustment and group living.
					My child's teacher appears to dislike changing class plans in the middle of an undertaking.
					Subject matter and skills are difficult to teach, therefore, the content of the curriculum must take precedence over the children's experiences.
					Public schools should become more involved in implementing innovative practices in education.
					It is frequently necessary for a teacher to demonstrate her authority.
					Schools of today are neglecting the basic academic subjects.
					A child shouldn't tell a teacher that she's wrong even if she is.
					My child's teacher does not appear to enjoy having to adapt to new and unusual situations that occur in the classroom.
					One of the big difficulties with schools today is that discipline is often sacrificed for the sake of freedom.
					A child who doesn't show respect for his teacher won't learn much from her.
					The reason that most innovations are dropped is that when the newness wears off, the old ways are found to be the best after all.
					It may be alright to have parents visit the class once in a while, but it interferes with the teacher's work just the same.
					What is needed in the classroom is a revival of respect for the teacher.
					Good relations with parents may be important, but discussing their children's work with them is generally ineffective.
					Teachers should exercise more authority over their students than they do.
					Educational authorities have been negligent in allowing new materials and methods to interfere with the success of traditional approaches.

1 = strongly disagree
2 = disagree
3 = neutral
4 = agree
5 = strongly agree

Scale II: Professional Satisfaction

1	2	3	4	5	
					I think my child's teacher is a good teacher.
					The stress and strain of teaching makes my child's teacher appear less enthusiastic about her job.
					Teaching appears to give my child's teacher a great deal of personal satisfaction.
					Other teachers appear to be better prepared to teach than my child's teacher.
					My child's teacher appears to view his/her job as the greatest contribution to society.
					My child's teacher appears to love to teach.
					My child's teacher appears to feel very confident in her position.
					As a teacher, my child's teacher is as competent as most other teachers.

Scale III: Teacher Cohesiveness

1	2	3	4	5	
					Experienced faculty members are supportive and helpful toward new and younger members in my school.
					The teachers at this school share educational ideas and techniques with each other.
					The teachers at this school don't seem to be able to work well together.
					The teachers in our school cooperate with each other to improve education instruction in the school.

Taken from: Mainstreaming: Learners and Their Environment. M. Kaufman, J.A. Agard & M.I. Semmel, Brookline Books, Cambridge, MA 1985.

APPENDIX 12

Selected Children's Background Questionnaire

From Kaufman, M., Agard, J. & Semmel, M. (1985). Mainstreaming: Learners and Their Environment. Cambridge, MA: Brookline Books. Used with permission.

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE

1. Date of Child's Birth: ______ / ______ / ______ (month / day / year)

2. Sex:

   ______ Male

   ______ Female

3. Ethnic Group

   ______ Negro

   ______ Indian

   ______ Oriental

   ______ Spanish-Surnamed

   ______ Caucasian (other than Spanish Surnamed)

4. Father's Occupation: (This question refers to the father or father substitute living in the home) (Check only one)

   ______ Professional and semi-professional workers. This includes individuals who perform advisory, administrative or research work which is based upon the established principles of a profession or science and which requires professional, scientific or technical training equivalent to that represented by graduation from a college or university of recognized standing.

   ______ Farmers and farm managers. This includes individuals who work their own farm or individuals who manage and supervise the running of farms for the owner.

   ______ Proprietors, managers and officials, except farm. A proprietor is an entrepreneur who owns and, alone or with assistance, operates his own business and is responsible for making and carrying out its policies. A manager is one who manages all or a part of the business of another person or agency; who has large responsibility in the making and carrying out of the policies of the business; and who through assistant, is charged with planning and supervising the work of others. An official has large responsibilities in the making and carrying out of the policies of the concern.

   ______ Clerical, sales and kindred workers. A clerical or kindred worker is one who, under supervision, performs one or more office activities, usually routine, such as preparing, transcribing and filing written communications and records.

   ______ Craftsmen, foremen and kindred workers. This includes individuals "engaged in a manual pursuit, usually not routine, for the pursuance of which a long period of training or an apprenticeship is usually necessary and which in its pursuance calls for a high degree of judgment or manual dexterity, and for ability to work with a minimum of supervision and to exercise responsibility for valuable production and equipment." These individuals may direct other workers under supervision.

   ______ Operatives and kindred workers. This includes individuals engaged in manual pursuit, usually routine, for the pursuance of which only a short period or no period of preliminary training is usually necessary and which in its pursuance usually calls for the exercise of only a moderate degree of judgment of manual dexterity. Such jobs require only a moderate degree of muscular force.

   ______ Domestic service workers include those individuals performing personal services in private homes.

   ______ Protective service workers. A protective service worker is one engaged in protecting life or property.

   ______ Service workers, except domestic and protective, are those engaged in cleaning and janitor services in buildings other than private homes, or performing services often of an individual character for other persons as a barber, cook, waitress or practical nurse.

   ______ Farm laborers and foremen. A farm laborer is a hired worker or unpaid member of a farm operator's family who works on a farm. A farm foreman is one who directs farm laborers under the supervision of a farmer or farm manager.

   ______ Laborers, except farm, are those engaged in a manual pursuit, usually routine, for the pursuance of which no special training, judgment or manual dexterity is usually necessary and in which the worker usually supplies mainly muscular strength for the performance of coarse, heavy work.

   ______ Other (describe fully) ______________________________

   ____

   ____

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE, continued

   ______ Don't know (give best estimate) ______________________________

   ____

   ____

   ______ No father or father substitute living in the home

5. Mother's Occupation (The question refers to the mother or mother substitute living in the home) (Check only one.)

   ______ Professional and semi-professional workers. This includes individuals who perform advisory, administrative or research work which is based upon the established principles of a profession or science and which requires professional, scientific or technical training equivalent to that represented by graduation from a college or university of recognized standing.

   ______ Farmers and farm managers. This includes individuals who work their own farm or individuals who manage and supervise the running of farms for the owner.

   ______ Proprietors, managers and officials, except farm. A proprietor is an entrepreneur who owns and, alone or with assistance, operates his own business and is responsible for making and carrying out its policies. A manager is one who manages all or part of the business of another person or agency; who has large responsibility in the making and carrying out of the policies of the business; and who through assistants, is charged with planning and supervising the work of others. An official has large responsibilities in the making and carrying out of the policies of the concern.

   ______ Clerical, sales and kindred workers. A clerical or kindred worker is one who, under supervision, performs one or more office activities, usually routine, such as preparing, transcribing and filing written communications and records.

   ______ Craftsmen, foremen and kindred workers. This includes individuals "engaged in a manual pursuit, usually not routine, for the pursuance of which a long period of training or an apprenticeship is usually necessary and which in its pursuance calls for a high degree of judgment or manual dexterity, and for ability to work with a minimum of supervision and to exercise responsibility for valuable production and equipment." These individuals may direct other workers under supervision.

   ______ Operatives and kindred workers. This includes individuals engaged in manual pursuit, usually routine, for the pursuance of which only a short period or no period of preliminary training is usually necessary and which in its pursuance usually calls for the exercise of only a moderate degree of judgment or of manual dexterity. Such jobs require only a moderate degree of muscular force.

   ______ Domestic service workers include those individuals performing personal services in private homes.

   ______ Protective service workers. A protective service worker is one engaged in protecting life or property.

   ______ Service workers, except domestic and protective, are those engaged in cleaning and janitor services in buildings other than private homes, or performing services often of an individual character for other persons as a barber, cook, waitress or practical nurse.

   ______ Farm laborers and foremen. A farm laborer is a hired worker or unpaid member of a farm operator's family who works on a farm. A farm foreman is one who directs farm laborers under the supervision of a farmer or farm manager.

   ______ Laborers, except farm, are those engaged in a manual pursuit, usually routine, for the pursuance of which no special training, judgment of manual dexterity is usually necessary and in which the worker usually supplies mainly muscular strength for the performance of coarse, heavy work.

   ______ Other (describe fully) ______________________________

   ____

   ______ Don't know (give best estimate) ______________________________

   ____

   ______ No mother or mother substitute living in the home

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE, continued

6. Father's Education (The question refers to the father or father substitute living in the home.) (Check only one.)

____ None
____ Some grade school
____ Completed grade school (1st – 6th grade)
____ Some junior high (7th – 8th grade)
____ Completed junior high (7th – 8th grade)
____ Some high school but did not graduate (9th grade is included in high school)
____ High school graduate
____ Vocational or business school after high school
____ Some college – less than four years
____ College graduate
____ Attended graduate or professional school
____ Don't know (give best estimate ____________________)
____ No father or father substitute

7. Mother's Education (this question refers to the mother or mother substitute living in the home.) (Check only one.)

____ None
____ Some grade school
____ Completed grade school (1st – 6th grade)
____ Some junior high (7th – 8th grade)
____ Completed junior high (7th – 8th grade)
____ Some high school but did not graduate (9th grade is included in high school)
____ High school graduate
____ Vocational or business school after high school
____ Some college – less than four years
____ College graduate
____ Attended graduate or professional school
____ Don't know (give best estimate ____________________)
____ No mother or mother substitute living in the home

8. Socio-Economic Status: (Check only one.)

____ Upper class
____ Upper middle class
____ Middle class
____ Lower middle class
____ Lower class

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE, continued

9. Is this child from a family in which the primary supporter of the family is receiving welfare?

____ Yes
____ No

10 Family Status: (Check only one.)

____ Mother and father present in the home
____ Mother only present – no other male figure
____ Mother (real) and father-substitute (family friend, uncle, brother, grandfather) in the home
____ Father only present – no other female figure present
____ Father (real) and mother-substitute (family friend, aunt, sister, grandmother) in the home
____ Other (lives with grandparent, foster parents, etc.)

11. How many days was this child absent?

____ Days during the 1970-71 school year
____ Days during the 1971-72 school year as of ______/______72 (date)
month day

12. Did this child participate in any of the following before entering first grade? (Check only one.)

____ Headstart or preschool sponsored by public school
____ Headstart or preschool sponsored by O.E.O. or other public (federal, state or local) agency (other than public school)
____ Preschool or nursery sponsored by private agency (including churches)
____ Headstart, preschool or nursery (sponsorship unknown)
____ Kindergarten sponsored by public school
____ Kindergarten sponsored by other public agency
____ Kindergarten sponsored by private agency (including churches)
____ Kindergarten (sponsorship unknown)
____ Information unavailable

13. How many different elementary schools has this child attended?

____ Schools in this district
____ Schools in other districts

14. What is the predominant language spoken in this pupil's home? (Check only one.)

____ English
____ An American Indian Language
____ An Oriental Language
____ Spanish
____ French
____ Other

15. What is this child's most recent I.Q. score?

15a. Date of most recent test ______/______
month year

15b. Name of test

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE, continued

15c. Verbal Scale IQ score ____

15d. Performance Scale IQ score ____

15e. Full Scale IQ score ____

16. How are parents of this child involved in his educational program? (Check one or more.)

____ On-going regularly scheduled conferences with regular teacher(s)

____ On-going regularly scheduled conferences with special education teacher(s)

____ Periodic conferences with regular teacher(s)

____ Periodic conferences with special education teacher(s)

____ Periodic conferences with principal

____ Periodic conference with other school personnel (describe ____________________)

____ Periodic written reports on child's progress

17. Are the parents of this child involved in any formal program of parent involvement?

____ Yes

____ No

18. Are the parents of this child responsible for the implementation of certain activities in the home setting?

____ Yes

____ No

QUESTIONS 19-27 REFER TO HANDICAPPED CHILDREN ONLY

19. At what age was this child first referred for special education services?

____ age

20. In what grade was this child first referred for special education services? (Check only one.)

____ Before coming to school, in very early childhood – pre-nursery school

____ Before coming to school – during Headstart or nursery school

____ Kindergarten

____ First grade

____ Second grade

____ Third grade

____ Fourth grade

____ Fifth grade

____ Sixth grade

21a. Did this child repeat a grade before he began receiving special education services?

____ Yes

____ No

21b. If yes, what grade(s) ____

____

22. At what age was this child placed in the special education program?

____ age

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE, continued

23. How many total months was this child in a self-contained special education program? (Do not count summer months)

____ months

24. What instructional arrangement was this child in last year? (Check only one.)

____ Assigned to special education class all day

____ Assigned to special education class and attends non-academic regular class

____ Assigned to special education class and attends some academic and non-academic regular classes

____ Assigned to regular classroom and attends special education classroom (i.e. resource room)

____ Assigned to regular classroom all day

25. How many hours during the week does this child spend in each of the following situations? (Total should equal number of school hours) (Estimate to nearest half-hour.)

	Subject Matter Areas	With Special Education Children Only	Integrated With Regular Children
A.	Reading	____ hrs.	____ hrs.
B.	Language Arts	____ hrs.	____ hrs.
C.	Handwriting	____ hrs.	____ hrs.
D.	Spelling	____ hrs.	____ hrs.
E.	Arithmetic	____ hrs.	____ hrs.
F.	Science	____ hrs.	____ hrs.
G.	Social Studies	____ hrs.	____ hrs.
H.	Spanish (or other foreign language)	____ hrs.	____ hrs.
I.	Other academic subjects	____ hrs.	____ hrs.
J.	Physical Education	____ hrs.	____ hrs.
K.	Music	____ hrs.	____ hrs.
L.	Art	____ hrs.	____ hrs.
M.	Library	____ hrs.	____ hrs.
N.	Recess	____ hrs.	____ hrs.
O.	Lunch	____ hrs.	____ hrs.
P.	Visual-Perceptual Training	____ hrs.	____ hrs.
Q.	Language Development	____ hrs.	____ hrs.
R.	Motor Training	____ hrs.	____ hrs.
S.	Auditory-Listening Training	____ hrs.	____ hrs.
T.	Other (explain) ________________________		
U.	Total	____ hrs.	____ hrs.

SELECTED CHILDREN'S BACKGROUND QUESTIONNAIRE, continued

26. Is this child in a regular ADA count of your school district?

____ Yes

____ No

27. If this child has been designated as having a language and/or learning disability, what were his special diagnosed disabilities? (Check one or more).

____ Behavior control problems

____ Visual Perception

____ Auditory Perception

____ Motor Deficiency

____ Verbal Communication

____ Organization Deficit (memory, sequencing)

____ Specific academic difficulties

____ Other (describe) ____________________

____ Not an LLD child

__________ Special Education Director initial when Section I is complete.

APPENDIX 13

Rural Needs Survey

Code: ______________

EDUCATIONAL
RURAL NEEDS SURVEY

1. What are the top five (5) concerns of rural special education?
    1.
    2.
    3.
    4.
    5.

2. What do you see as the unique needs of the rural population?

3. How does your special education district/cooperative provide related services?

4. What are the methods of special education for recruitment of related service personnel?

5. List 3 pros and 3 cons for contracting for services versus hiring an occupational therapist on staff:

Contract	Hire
Pros	Pros
1.	1.
2.	2.
3.	3.
Cons	Cons
1.	1.
2.	2.
3.	3.

6. How many students in your area are served by occupational therapists per year?

_______ 0 - 5
_______ 5 - 10
_______ 10 - 15
_______ 15 - 20
_______ 20 - 25
_______ 25 - 30
_______ 30 - 35
_______ 35 or more

7. How many students require occupational therapy services, but are unserved due to vacant positions?

_______ 0 - 5
_______ 5 - 10
_______ 10 - 15
_______ 15 - 20
_______ 20 - 25
_______ 25 or more

8. What do you see as the role(s) of the occupational therapist?

9. Would you be willing to hire an extra paraprofessional to work with students if an occupational therapist were available to you on a limited basis?

10. Of the following topics, which ones would you and your staff be interested in as inservices provided by an occupational therapist?

_____ positioning
_____ feeding
_____ visual-perception
_____ perceptual-motor skills
_____ evaluation tools
_____ handwriting remediation
_____ ______________
_____ ______________
_____ handling
_____ sensory integration
_____ classroom organizational skills for students
_____ posture
_____ classroom activities adaptation
_____ incorporating therapeutic techniques in the classroom
_____ ______________________
_____ ______________________

APPENDIX 14

Occupational Therapist General Information

Code: ____________________

OCCUPATIONAL THERAPIST

General Information

Current Job Title: ____

Length of time in current position: ______________________________

University Background

Undergraduate: ____

Graduate: ____

Number of Years Practicing Occupational Therapy: ______________

Number of Years Practicing in Pediatrics: ____________________

Density of Population Served: (pop. density = pop. of town)

0-1,000	_____	3,000-4,000	_____
1,000-2,000	_____	4,000-5,000	_____
2,000-3,000	_____	5,000-above	_____

Memberships:

American Occupational Therapy Association

______ Current
______ Previous

Social Interest Section

_____ Administration
_____ Physical Disability
_____ Sensory Integration
_____ Developmental Disabilities
_____ Gerontology
_____ Mental Health
_____ Work-related Programs

State Association
______ Current
______ Previous

APPENDIX 15

Consent Forms

Managing Occupational Therapy
Educator Consent Form

The Department of Occupational Therapy Education at the University of Kansas Medical Center is developing a training module for preservice occupational therapy students focusing on the needs of rural education. In order to prepare the students for possible fieldwork and job opportunity in the rural setting, we are currently surveying occupational therapists regarding needs and attitudes about special education services.

Questionnaires include:
1. General Information
2. Rural Needs Survey
3. Classroom Integration Questionnaire
4. Teacher Educational Attitude Questionnaire
5. Teacher Climate Control Qeustionnaire

Please read the following statements, check if consent is given or not given for participation and sign at the bottom of the page. If there are any questions; please contact Paula Hughes, OTR, Project Manager, at (913) 588-7195.

I understand that the research in which I am being asked to participate will include answering the above mentioned questionnaires and surveys. I understand that the data obtained in this study is confidential and that no individual identification of me will be made in reports of this study.

I understand that my participation is voluntary and that I may refuse to participate in the study if I so choose.

I understand in signing this consent form in duplicate, one copy will be retained for the project files and one copy is for my records.

I give permission for the researchers of the M.O.R.E. project to use the information I provide as described above, knowing that all individual identification will be removed.

I do not wish to participate.

Name:_______________________________

Date:_______________________________

Managing Occupational Therapy
OT Student Consent Form

The Department of Occupational Therapy Education at the University of Kansas Medical Center is developing a training module for preservice occupational students focusing on the needs of rural education. In order to prepare the students for possible fieldwork and job opportunities in the rural setting, we are currently surveying occupational therapy students regarding knowledge and attitudes about working with children receiving special education services.

Questionnaires include:

1. The SBS Inventory of Teacher Social Behavior Standards and Expectations
2. Pediatric competencies
3. Classroom Integration Questionnaires
4. TOTEMS: Training Occupational Therapy Education - Attitudes Towards School Based Services

Please read the following statements. If there are any questions; please contact Paula Hughes, OTR, Project Manager, at (913) 588-7195.

I understand that the research in which I am being asked to participate will include answering the above mentioned questionnaires and surveys. I understand that the data obtained in this study is confidential and that no individual identification of me will be made in reports of this study.

I understand that my participation is voluntary and that I may refuse to participate in the study if I so choose.

I understand that the University of Kansas Medical Center does not maintain a policy of providing free medical treatment or other forms of compensation for injuries incurred as a result of participating in biomedical or behavioral research.

Returning the completed questionnaire signifies consent for use of the information you provide the M.O.R.E. project.

FIELDWORK SITE PARTICIPANTS
MANAGING OCCUPATIONAL THERAPY IN RURAL EDUCATION
"M.O.R.E."

Parents

1. Name:
   Address:

   Phone:
2. Name:
   Adress:

   Pnone:
3. Name:
   Address:

   Phone:
4. Name:
   Address:

   Phone:

Educators

1. Name:
   Address:

   Phone:
2. Name:
   Address:

   Phone:
3. Name:
   Address:

   Phone:
4. Name:
   Address:

   Phone:

Administrator

1. Name:
   Address:

   Phone:
2. Name:
   Address:

   Phone:

SITE:________________________

Fieldwork Coordinator:______________________________

APPENDIX 16

M.O.R.E. Abstract

The University of Kansas Medical Center

School of Allied Health
Department of Occupational Therapy Education
4013 Hinch

ABSTRACT

Managing Occupational Therapy in Rural Education
(M.O.R.E.)

Occupational therapy is mandated as a related service in PL94-142 for those handicapped children who require these services to benefit from their educational experiences. For these children, occupational therapists are a critical part of the interdisciplinary team that develops and implements the individualized educational plan (IEP). Smaller and more rural school districts presently face several disadvantages in attempting to secure the services of occupational therapists as related service personnel in their schools. First, the areas to be served are often geographically distant from metropolitan areas which have a larger variety of business, social and educational opportunities; this makes it difficult to recruit experienced professionals to relocated to the area due to other family commitments. Secondly, there are smaller numbers of special education students requiring service due to a smaller population in general which means that perhaps only one occupational therapist is required. Lack of ongoing professional contact makes it difficult for a new graduate to take a job in a rural setting without specialized preservice experiences which address not only the knowledge and skills to work in public schools, but the additional expertise required to tailor these competencies to the unique needs of a rural setting.

The purpose of the proposed project is to demonstrate a model designed to train preservice occupational therapy students to work effectively in the public schools, specifically those in rural settings. This effort is directed at improving the knowledge, skills, and attitudes of occupational therapy students in regard to the unique social, environmental, and educational needs of the rural setting so that occupational therapy students will be more prepared and have a greater ability to pursue job opportunities serving rural districts.

The goals of this project are: (1) to demonstrate a model for training preservice occupational therapy students in specialized techniques and procedures that enable successful service delivery in rural school settings; (2) to validate the model by assessing the impact on occupational therapy students, rural personnel, the community, and on the handicapped students served and (3) to develop and implement a plan for dissemination and replication of the validated rural training model. These goals will be met through a variety of didactic and experiential learning opportunities. Although all student in the Occupational Therapy Curriculum at the University of Kansas will participate in some of these experiences, approximately 15% of each class (10-12 students) will participate in specialized fieldwork experiences in preparation for rural school job opportunities when they graduate.

This grant is sponsored by the Office of Special Education and Rehabilitative Services

Winnie Dunn, Ph.D., OTR, FAOTA
Principle Investigator

Paula Hughes, OTR &
Brenda Rowley Gray, OTR
Project Managers

39th and Rainbow Blvd., Kansas City, Kansas 66103 • (913) 588-7195

APPENDIX 17

Fieldwork Course Information

The University of Kansas Medical Center

Course Descriptions
Level I and Level II Fieldwork

OT 203 Early Development (1 credit hour)

Selected field of experience with individuals in the infant-adolescent stages including both handicapped and non-handicapped populations. Includes practice in interviewing, observation, recording, reporting, and use of professional ethics.

Students scheduled for #203 are Junior students (beginning their first semester of academic coursework at KUMC). This fieldwork is divided into several two-hour observation experiences in facilities serving children ages 0-18. Students will be supervised by OTR's and/or other professionals. Facilities may include public and private schools, out-patient and in-patient clinics, day-treatment programs, respite care.

OT 253 Adult Adaptation (1 credit hour)

Selected field experience with adults at various stages in the life span including both handicapped and non-handicapped populations. Includes analyzing processes of work and leisure, teaching activities and leading activity groups.

Sites will primarily be those serving a chronic caseload, (i.e. retirement facilities, adult M.R. facilities, facilities with on-going support groups) which can provide student experiences in assisting with adapted leisure activities and/or opportunities to lead reality orientation or reminiscence groups. Students will be supervised by OTR's and/or other professioanls. The K.U. Fieldwork Office will provide names of appropriate facilities to students. Students will make their own arrangements for fieldwork for this experience only.

OT 303 Adapted Occupations (1 credit hour)

Selected field experiences with persons having dysfunctional conditions. Includes use of instruction in adaptive techniques; use of structured assessments.

Students scheduled for #303 are Junior students. This fieldwork provides the student's first hands-on opportunity to co-treat patient/clients. This 16 hour fieldwork is divided into a 8 hour experience in a psychosocial setting and a 8 hour experience in a physical dysfunction setting. Students will be supervised by an OTR or COTA. Student will co-treat patients/clients in the basic areas of daily life tasks (physical daily living skills, psychosocial/emotional daily living, work, or play/leisure). Students are not ready for neurological assessments or treatment. Students will interview a patient/client (with permission of the facility/supervisor).

OT 413 Psychosocial Dysfunction (1 credit hour)

Field experience in a clinical setting involving treatment and concurrent evaluation of at least one individual with psychodocial dysfunction.

Students scheduled for OT 413 are Seniors completing their final academic semester. This full-time, 40 hour week fieldwork is scheduled at in-patient and out-patient hospital clinics and community mental health settings. Students will be superised by an OTR. Students will participate in group and 1-1 patient/client treatment, administer evaluation, and participate in the development of a program plan for the patients/clients. Optional experiences could include team conferences and brief visits to other professional services.

OT 490 Level II Physical Dysfunction (6 credit hours)

OT 491 Level II Pshychosocial Dysfunction (6 credit hours)

OT 492 Level II Selected Interest (6 credit hours)

Students must complete nine months of full-time Level II Fieldwork; three months is Physical Dysfunction (OT 490), three months in Psychosocial Dysfunction (OT 491), and three months in a Selected Interest Area (OT 492). Occupational Therapy Assistants who have successfully completed all academic and fieldwork requirements in an accredited technical program, are not required to enroll in OT 492.

Students must maintain a 2.5 GPA and successfully complete all academic classes to be eligible to enroll for Level II Fieldwork. Students must complete all Level II Fieldwork within 18 months of the date of completion of the required academic coursework.

Students are scheduled for Level II Fieldwork at accredited hospitals and at the following types of community facilities: mental health centers, rehabilitation centers, geriatric centers, work rehabilitation centers, and public and private schools. Students are supervised by an OTR who has had at least one year of clinical work since obtaining his/her certification.

Students receive a Bachelor of Science in Occupational Therapy after successful completion of Level II Fieldwork and are eligible to write the Certification Examination for Occupational Therapists Registered.

APPENDIX 18

MORE Initial Findings Report

MANAGING OCCUPATIONAL THERAPY IN RURAL EDUCATION
(M.O.R.E.)
INITIAL FINDINGS

The need for competent related service personnel, particularly occupational therapists, to serve in rural educational areas has been well documented. Two-thirds of all United States schools are located in rural areas, and the majority of unserved and underserved handicapped children are enrolled in these rural schools (Clark and White, 1985; Massey and Crosby, 1983). In the past, there has been some debate regarding what constitutes a rural district. Helge (1984) reports that a district is considered rural when the number of inhabitants is fewer than 150 per square mile or when located in counties with 60% or more of the population living in communities no larger than 5,000 inhabitants. Districts with more than 10,000 students and those within a Standard Metropolitan Statistical Area, as determined by the United States Census Bureau, are not considered rural.

A major problem in rural education is recruitment and retention of qualified staff (Helge, 1984; Will, 1985; Latham and Burnham, 1985; Kirmer, Lockwood, Mickler and Sweeney, 1984; Marrs, 1984). A 40% to 50% attrition rate annually is typical (Will, 1985). A survey conducted in 1983 by the National Rural Project reported that only 17% of rural districts and special education cooperatives indicated that they had an adequate number of special education personnel. In a recent report filed by the Ad Hoc Commission on Occupational Therapy Manpower, data collected annually by the U.S. Office of Special Education Program, U.S. Department of Education, reports the needs for occupational therapists have consistently outnumbered the supply. In 1983, state special education departments indicated a need for 20.5 percent more occupational therapists than were currently employed under Part B funding of P.L. 94-142 (OT Manpower). Helge (1984) notes that itinerant positions, such as occupational therapists, are most often not filled. Preservice training which does not consider rural needs, contribute to chronic vacancies of these positions.

Recognizing the need for preservice training of occupational therapists to serve in school systems, the Bureau of Education for the Handicapped in 1978 funded the American Occupational Therapy Association to develop a model for training occupational therapists employed in school systems (Gilfoyle and Hays, 1979). The Special Education Department at the University of Kansas developed a special tract for occupational and physical therapists pursuing a masters degree in Special Education. Their project, funded by OSERS in 1980, developed and implemented a model to prepare therapists to serve as consultants to programs for severely handicapped students in public school settings.

In order for therapists to integrate services into rural school systems they need to have an understanding of the system, its educational aims, and its philosophy (Regan,1982). Punwar and Wendt (1980) outlined the effort to mandate occupational therapists in Wisconsin to be certified by the Department of Public Instruction for those therapists serving in public schools. Identification of competencies and relevant curriculum content were established as cornerstones of certification standards.

The need to alter and adapt types of service provision for occupational therapists is essential in rural settings. Through preservice training, the necessary understanding of the roles a consultant and knowledge of different types of service delivery can be taught. The skills of a consultant are essential to service delivery in educational setting (Dunn, 1985). Dunn (1985) notes that the demographics of school (rural vs. urban) do not change teacher or administrators preference of consultative style.

A survey of educators, therapists and administrators in the midwest area (Kansas, Iowa, Nebraska, and Missouri) conducted by Dunn (1986) asked pertinent questions reflective of the need for related service of occupational therapy in rural educational settings. University bachelor's level programs in these states did not have preservice training for service in rural education although all departments expressed a need for such a curriculum. State agencies recognized the need for preservice training and reported chronic vacancies in rural settings for occupational therapists. Additionally all reported that due to lack of services, children with special needs are either unserved, underserved, or most travel to the closest urban setting for services.

Special education directors reported that of related services personnel an occupational therapist could best serve their programs' needs (Dunn, 1986). This preference was also supported by a survey completed by Guess (1980) at the University of Kansas. Teachers of severely multiply handicapped students ranked their perceptions of contributions from other professionals and disciplines in the education of students in their classroom. The results indicated that teachers perceive occupational therapists as the most needed service, followed by physical therapy and speech pathology, medicine, nursing, social work, and psychology. Additional concerns expressed by special education directors include (1) lack of preservice training for occupational therapy serving in school settings, (2) difficulty with currently employed therapists continuing to rely solely on the medical model and (3) inability of therapists to identify and implement appropriate methods and amounts of service delivery in rural education settings.

In order to address these needs, the Occupational Therapy Education Department at the University of Kansas designed a preservice training model. The project is funded by OSERS to investigate preservice training needs for service delivery to rural education settings. This paper will present preliminary data on trends of rural needs that have been identified and suggest plans for preservice training.

METHODS

POPULATIONS:

For purposes of this study occupational therapy students and pediatric occupational therapists were surveyed.

All Semester I students enrolled in the Occupational Therapy Curriculum at the University of Kansas Medical Center during the Fall 1987 semester were asked to participate in the initial data collection. This group was comprised of 61 students who were newly entering the program. These students were enrolled in a developmental life task course and a fieldwork course providing them exposure to the pediatric age group. These students completed the surveys and questionnaires in early November 1987.

Occupational therapy personnel currently practicing in pediatrics in Kansas, Iowa, Nebraska, and Missouri were also sent questionnaires and surveys. Both rural and urban based personnel were included. For purposes of this study, criteria established by Helge (1984) was used to determine those personnel in serving in rural communities and those serving in urban communities. The names of the therapists were obtained through state occupational therapy associations and through the state departments of education. The forms were sent to 95 therapists.

INSTRUMENTS/MATERIALS:

Three documents were used in collected data presented here. Occupational therapy students and pediatric occupational therapy personnel were asked to complete the Attitudes Toward School-Based Services (ATSBS) survey from Training Occupational Therapy Educational Management in Schools (Gilfoyle,1981). Respondents were asked to indicate how much she or he agreed or disagreed with 36 statements regarding school-based services on a scale for -3 ("1 disagree very much") to +3 ("1 agree very much").

The second instrument both students and occupational therapy personnel were asked to complete is the Classroom Integration Questionnaire (CIQ). This questionnaire, taken from Mainstreaming: Learners and their Environment (Kaufman, Agard, and Semmel, 1985), presents the reader with vignettes of 25 children with primarily cognitive or behavior problems. The CIQ asks respondents to indicate appropriate classroom placement for each child: a regular classroom, a regular classroom all day with supplemental materials and advice, a regular classroom part of the day with supplemental materials and advice, a special class all day, or not for public education.

Occupational therapy personnel were asked to complete a third document, Occupational Therapy Needs Survey (OTNS) developed by the MORE project staff. The survey included demographic information, questions regarding roles, preservice training needs, challenges of service provision in educational settings, inservice topics, team members, resources, and caseloads.

PROCEDURES:

The Semester I occupational therapy students were asked to complete the ATSBS and the CIQ during a one-hour home-room period in early November. Students were given an abstract outlining the project and a letter stating their participation was requested but not mandatory. Each student was given a set of forms to complete. As the forms were completed, each student indicated their number on a master list developed for longitudinal purposes.

The occupational therapy personnel received a packet in the mail containing an introductory letter, the project abstract, a consent form, the coded instruments used for data collection, and a self-addressed, stamped envelop. The packets were mailed in mid-October with a return requested in one month.

Responses from each questionnaire or survey were tabulated by frequency, and analyzed. The percent of frequency was compared for each group (occupational therapy students, rural occupational therapy personnel, urban occupational therapy personnel).

Results

Of the 61 occupational therapy students, 55 students (90%) completed the packet. Six students (10%) chose not to participate. Of the 95 occupational therapy personnel surveyed, 29 (31%) responded to the surveys and questionnaires at the end of 2 months. Of the responding occupational therapy personnel, 19 (65%) were identified as urban-based therapists and 10 (34%) were identified as rural-based personnel.

Table 1 presents the demographic information about the occupational therapy personnel. As indicated in the table, the urban and rural personnel are relatively equal in educational background, years of practice in occupational therapy, years in pediatrics, and years practicing in the public schools. Differences were noted in number of schools served, number of miles traveled each week, and in the number of children served by each therapist.

The OTNS was completed by all occupational therapy personnel returning their packets. The participants were asked to list their top five concerns in preservice training and needs in occupational therapy service delivery in educational settings. Table 2 lists the preservice content areas listed by rural and urban occupational therapy personnel. The areas noted by both groups as most important include advanced sciences, child development, communication skills, knowledge of educational philosophy and aims, evaluation and interpretation skills, and writing individualized educational program.

The OTNS also asked respondents to list needs of occupational therapy service delivery in educational settings. Table 3 lists needs as stated by rural and urban personnel. As listed in the table, the top 3 needs for both groups are issues of service provision in terms of caseload size, time, space, and money; consultation skills; and continuing education resources. Many other areas of overlap existed, although each need had differing frequency from group to group.

The ATSBS was completed by the occupational therapy students, the rural occupational therapy personnel, and the urban occupational therapy personnel.

Although respondents had 6 categories of choices (-3, -2, -1, +1, +2, +3), responses were grouped into negative (-3, -2), neutral (-1, +1), or positive (+2, +3) categories. Responses were analyzed first by grouping items into five content areas. The results of the content area analysis are picture in Graph 1. Percentage groupings were essentially the same across all groups in each area when comparing the percent of negative, neutral, and positive responses. Three items had less than a 20% difference in response patterns across groups; 15 items showed a 20-30% difference; 7 items showed a 30-40% difference; 7 items showed a 40-50% difference; and 4 items showed a 50% or more difference. Table 4 presents the pattern of differences for the 4 items with more than 50% difference.

The CIQ has items describing children who have cognitive problems (N=11) and children who have behavior problems (N=12). Two items described children with both cognitive and behavior problems. Percent of responses to each level of classroom placement were plotted for the 25 items. Visual inspection revealed that 22 items had very similar patterns of choices across all three groups, with students and therapists most frequently choosing mainstreamed with special classroom help, resources room and special class placement. The three items that generated significantly different patterns of response were vignettes about children with cognitive difficulties which lead to poor ability to follow instructions necessitating the use of concrete directions and materials.

Discussion:

Occupational therapy personnel working in both rural and urban areas in four midwest states report similar educational backgrounds, years of practice in occupational therapy and specifically in pediatrics within the public schools. Differences appear in the number of schools and children served by each personnel and to a greater extent the number of miles traveled to provide these services. Rural personnel reported having an average of more than four times as many miles per week as urban personnel. The rural personnel also averaged 50% more schools served and 25% more children on their caseloads. These additional factors require rural based personnel to consider other service provision patterns such as monitoring and consultation as a means of addressing these needs. Children in rural areas may receive direct service less frequently than children in urban areas.

The OTNS results indicate that rural and urban occupational therapy personnel agree on the most important preservice content areas necessary for working in their particular settings. These include knowledge about the basic sciences, child development , and communication and evaluation and interpretation skills. These skills are desirable in all areas of occupational therapy practice. Additionally both groups listed knowledge of educational philosophy and aims as well as the Individual Education Planning process as necessary content. These additional areas indicate the significance the personnel place on occupational therapy personnel having knowledge of working in a school setting prior to accepting a position.

Occupational therapy personnel also responded similarly when asked to list the needs of occupational therapy in education settings. Although with differing frequencies, both the rural and urban personnel listed issues of service provision (caseload size, time, space for therapy, money for equipment); consultation skills; and continuing education resources as the top three areas of need. This suggests that even though service provision patterns differ, many basic needs are the same for all school personnel.

When looking at attitudes toward school-based services, the occupational therapy students' responses were different from occupational therapy personnel (both rural and urban) on items which reflected of knowledge other team members such as regular education teachers, special education teachers, and special education directors. Occupational therapy personnel indicated they felt other team members did not have a good understanding of what occupational therapy is or what specific treatment theories entailed. Students tended to respond neutrally. This could be due to the students' lack of exposure to the educational setting. Additional the personnel attitudes support a need for increased inservice education for the team about occupational therapy's role in special education.

Rural personnel responses varied from both urban therapists and students on items about service provision patterns and the age of the populations to be prioritized. With the large geographic areas covered by rural personnel, alternate patterns of service provision have had to be considered. Rural personnel are also more likely to serve persons throughout their development and into adulthood due to the service structure in rural areas, leading to more varied pattern of age priorities. 75% of urban personnel prioritized young children; perhaps with multiple staffing, these persons are more likely to specialize on a smaller age range. Students reported equal ratings across all ages to be served. This attitude may reflect the changing attitudes of society and the profession to meet the changing needs of the children with handicaps as they move from childhood to adolescence.

Urban therapists reported they felt regular education teachers are not prepared to meet the needs of children with handicaps in their classrooms. Rural personnel (82%) reported neutral attitudes regarding this statement. Urban districts often employ higher numbers of specialized personnel, such as special education teachers and related service personnel. In rural settings, fewer specialized personnel exist, thus leading to more frequent placement of children with handicaps in the regular classroom thus resulting in regular classroom teachers being experienced in dealing with special needs. Additionally, urban personnel reported they felt teachers are interested in inter-disciplinary work. Rural personnel also agree, but not as strongly. This could be due to urban personnel being more available to teachers with more opportunities at each school. Rural personnel may only serve each school on a weekly basis and with increased travel time between schools may not have the opportunity to consult with teachers or have team meetings as often.

Attitudes regarding administrative support for occupational therapy differed for the groups of occupational therapy personnel. Urban therapists felt administrators supported referrals for services. Almost three-quarters of the rural therapists were neutral on this support. This may be due to the increased accessibility of urban therapists to the administrators, possible because of closer proximity. 91% of the rural personnel indicated neutral attitudes and 9% indicated positive attitudes about principal's parental requests for occupational therapy services. 63% of the urban personnel were neutral and 25% were positive about the same issue. Again, this may be due to the urban personnel being more available to the schools they serve.

Twenty-two of the twenty-five items on the CIQ had similar patterns of choices for all three groups. The three items which varied had very different patterns of responses. In one case the three groups answered very differently from each other. For a second item the rural occupational therapy personnel and the urban occupational therapy personnel had similar patterns with the occupational therapy responding differently. The final item was responded to differently by the two groups of occupational therapy personnel with the students following the trend of the urban personnel. In general students also tended to place more students in the more restrictive settings (special class all day or not for public education). These differences in responses point out several implications for student training. First, students need to become more aware of what can be done to facilitate mainstreamed placement of children with learning problems. This would provide them with the information leading toward attitudes that more closely match the attitudes of practicing clinicians. From other data presented, rural occupational therapy personnel state teachers are competent to provide education for children with handicaps. Because of the lower incidence of handicapping conditions, and therefore fewer special educators available, support for regular education teachers is a major role for occupational therapy personnel in rural educational settings.

Recommendations:

The following recommendations for preservice training of occupational therapy students were identified from the preliminary data. First, students need a better understanding of the educational system. This includes knowledge of the state and federal laws, educational philosophy, and the process necessary for providing related services. Additionally, occupational therapy personnel need a better understanding of what educators (both regular and special) know and are capable of doing in their classrooms. The occupational therapy personnel will be more capable of facilitating teacher effectiveness in incorporating environmental changes for children with special needs. Secondly, occupational therapy students should understand patterns of service provision and how to use the various patterns effectively. In rural settings where the personnel have higher numbers of schools and children as well as increased mileage, alternatives to direct service must be considered. Students must be taught the importance of empowering others with skills that will be beneficial to these children. The final recommendation is for occupational therapy students to begin the process problem-solving for efficient use of resources. Time, money, space, and equipment resources will continue to be issues in service provision. So occupational therapy personnel must use available resources efficiently.

Occupational therapy continues to be a valued resource in public education. By addressing the specific needs identified by practicing clinicians new graduates can be more well prepared to serve rural educational systems. The beneficial outcomes will not only be for the professionals but also for the children and families receiving services.

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APPENDIX 19

Preassessment Article

Hughes, P. & Dunn, W. (1989). *Preassessment: An effective tool for the rural therapist.* Developmental Disabilities Special Interest Section Newsletter, 12 (4), 3-5.

Preassessment: An Effective Tool for the Rural Therapist

Paula Hughes, OTR
Winnie Dunn, PhD, OTR, FAOTA

Occupational therapists face many challenges as they practice in rural school systems. Often there is only one therapist available to serve several districts, schools are miles apart, and work space and equipment are minimal (Dunn & Gray, 1988). Therapists need to understand the unique educational philosophies and structures of rural schools to integrate therapy services effectively (Regan, 1982). Preservice training programs that emphasize traditional models of service provision do not prepare the occupational therapist to serve as an effective team member under these conditions. The Department of Occupational Therapy Education at the University of Kansas Medical Center has been conducting a grant project funded by the Office of Special Education and Rehabilitation Services (OSERS) entitled Managing Occupational Therapy in Rural Education (MORE). Project staff first interviewed and surveyed occupational therapists in urban and rural settings (as defined by Helge, 1984) to determine the unique issues and needs of the rural school therapist. These data are being used to develop preservice training modules aimed at improving the knowledge, skills, and attitudes of occupational therapy students regarding the unique social, environmental, and educational needs of the rural setting. A variety of issues emerged for the rural therapist, including the need to provide effective consultation and to develop more effective screening and assessment strategies (Dunn & Hughes, 1989). The purpose of this article is to describe the use of one strategy, preassessment, to increase the efficiency of the referral and assessment process in rural public school systems.

Schools have standard procedures for referrals to special education services. A referral may be made by a parent, a teacher or other professional, or an outside agency. The referral is usually reviewed by a special services team, which has a predetermined amount of time to act on the referral (usually 30 days). The activities that occur within this time period can be referred to as preassessment tasks (although state or local educational agencies may use a different term), because they occur before the formal comprehensive assessment. Frequently, school districts designate staff to serve as the preassessment team (e.g., the school psychologist, a teacher, a special education teacher, and the school principal). The team reviews the concerns of the person making the referral and creates a plan with that person that addresses his or her concerns but that does so within the student's current learning environment. The State Plan for Special Education (Kansas State Department of Education, 1987) defines this process:

> Preassessment is the first phase in determining whether the educational needs of a student can be met within the regular classroom... [it] provides support and assistance to regular classroom teachers so that they may deal effectively with students who exhibit learning and/or behavior differences. . . it is intended for all students who exhibit differences... no child can be labeled as exceptional until the multidisciplinary team has documented that the child had an opportunity to have learning experiences appropriate to his/her age and abilities, and that the child's learning potential has not been achieved in the regular classroom environment. (p. 87)

In other words, the preassessment team makes recommendations that address the student's specific difficulties. The classroom teacher (or other referring party) implements these recommended intervention techniques for a specified amount of time (generally 30 to 45 school days). The preassessment team assesses the impact of these interventions on the student's performance throughout this period to determine whether or not the strategies are effective and if any alternations are needed.

Occupational therapists have not routinely been involved in the preassessment process but are more commonly involved with the comprehensive evaluation (Kansas State Department of Education, 1989). With a therapist's time at a premium in rural schools, it is important to consider alternatives to a therapist's direct involvement with every referral to the evaluation team. An evaluation is not always indicated; those students who are successful with preassessment strategies are maintained in their natural learning environments and do not have to undergo unnecessary comprehensive evaluations. Implementation of preassessment strategies shifts some of the work load by ensuring that evaluations are only administered to those students for whom simple classroom adaptations have been unsuccessful. When the preassessment process is used consistently, the therapist begins the evaluation and program planning process knowing which strategies have already been tried and how the student responded to them. This additional referral data saves time.

The itinerant nature of therapists in rural school settings makes it necessary to establish ongoing communication mechanisms with key professionals. Similar communication strategies can be used to contribute to the preassessment process and simultaneously to increase team members' knowledge about the potential contribution of occupational therapy. The occupational therapist determines which common referral complaints might be resolved by using strategies designed by a therapist. Many school districts have referral forms that list common concerns; it may be necessary to suggest additions to the list if it emphasizes only performance in subject areas. The therapist can then provide the key persons with a list of intervention techniques that can be used by preassessment team members as they screen referrals and design preassessment plans. Table 1 shows common referral complaints related to occupational therapy expertise, and the corresponding preassessment suggestions for each. The occupational therapist instructs preassessment team members in the correct application of suggestions (Dunn, 1989). The only suggestions included in a list such as this are those that can safely be implemented by others; if more complicated adaptations are required, a complete evaluation is necessary. More serious problems than those listed in the table would generally require the prompt involvement of the therapist; likewise, the therapist should intervene if the suggested adaptations are unsuccessful.

Occasionally, the occupational therapist may be called on to provide additional guidance during the preassessment process. Input may be provided through telephone conversations, detailed notes, additional reading material, or a meeting. These additional contacts provide further opportunities to clarify the occupational therapist's roles and areas of expertise, and the information thus gained by team members makes it easier for them to choose appropriate students for occupational therapy evaluation.

Case Study

At its weekly meeting, the preassessment team reviewed a referral from Mrs. Brown, the first-grade teacher. Tommy, an 8-year-old boy who had repeated kindergarten, was having difficulty writing neatly and completing seatwork correctly. The team identified these complaints as ones frequently addressed by the occupational therapist. The occupational therapist had met with them at the beginning of the school year to review the referral checklist and point out items for which she could provide assistance. At that time she had also provided the team with a list of simple adaptations that could be incorporated into classroom routines to address these concerns. The team decided to use several of the suffestions provided by the occuaptional therapist to assist Mrs. Brown and Tommy in the classroom. However, after reviewing the checklist options, the team decided that it needed more specific information from Mrs. Brown in order to choose appropriate recommendations. Mrs. Brown clarified her concerns by stating, "Tommy has difficulty finding items he needs in his desk, gets behind when I give directions and does not follow them correctly, and does not stay on the line when writing." Mrs. Brown also indicated that Tommy watched what the other students were doing when he lost his place. She did not feel that this was appropriate behavior and didn't want him to copy the other students' work.

With this more complete information, the team designed a preassessment plan that included many of the suggestions that had been provided previously by the occupational therapist. The team met with Mrs. Brown to discuss the situation and identified the following strategies:

Poor pencil/crayon use

- Provide larger sheets of paper
- Provide paper without lines or with widely spaced lines

Inability to complete seatwork successfully

- Provide larger spaces for answers
- Put fewer items on each page

Lack of organization; tendency to lose personal belongings

- Make a map showing where items belong
- Collect belongings; hand them out at the beginning of each activity

Failure to follow directions

- Allow student to watch a partner for cues

Mrs. Brown expressed concern that the other students in her class would complain if she made these accommodations for Tommy and not for others. The team explained that if these strategies worked they would maintain him in the regular classroom. They assured Mrs. Brown that as long as Tommy did his own work watching other students for cues could be a successful strategy for him, because he was already trying it on his own. The team also reassured Mrs. Brown that they would give her continued support as she implemented these strategies. They asked her to implement these intervention techniques for 4 weeks, reporting on Tommy's productivity each week, to determine whether or not they alleviated his classroom problems.

The strategies chosen from the referral checklist proved to be successful for Tommy. Mrs. Brown also came to feel comfortable providing Tommy with wide-ruled paper, a desk organization map, and a "direction partner." She was surprised to find that the other students did not feel that they were being treated unfairly, but in fact were very cooperative with the changes in the classroom routine.

This case study illustrates a successful preassessment process. Too often preassessment is not used effectively in schools, and students are evaluated unnecessarily. This is costly for the schools, in terms of bother professional time and financial resources, and can produce unnecessary anxiety in the students being evaluated, who may begin to feel that they are failures. Futhermore, time is at a premium for therapists in rural settings, and setting up an informative and efficient preassessment mechanism enables others to screen referrals and provides a mechanism to infuse occupational therapy expertise into the daily routines of the educational environment. This leads to better referrals at the outset and provides the therapist with much more information about a student and a given situation when an evaluation and individualized program plan are indeed indicated.

Conclusion

Although occupational therapists are not routinely involved in the preassessment process, they can provide valuable input to the preassessment team. Identifiaction of common referral complaints and suggested adaptations educates other team members about the unique knowledge and skills of the occupational therapist. This early involvement in the referral process makes efficient use of the rural therapist's valuable time, provides a needed service to the preassessment team, and encourages meaningful communication between the faculty and the therapist. Preassessment activities also cause less disruption of the learning process, provide more useful information about the student's learning style, and foster a sense of responsibility on the part of the classroom teacher to work effectively with all students. ■

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Table 1.
Classroom Adaptations to be Considered for Common Related Service Referral Complaints Prior to Comprehensive Assessment

Referral complaint — * = Possible adaptations

Poor lunch skills/behaviors
* Provide a wheeled cart to carry lunch tray
* Provide large-handled utensils
* Clamp lunch tray to table to prevent slipping
* Serve milk in sealed cup with straw

Poor toileting skills
* Provide a smaller toilet
* Provide looser clothing
* Provide a step stool for toilet/sink

Can't stay in seat; fidgety
* Allow student to lie on floor to work
* Allow student to stand to work
* Provide lateral support to hips or trunk (e.g., rolled towels)
* Adapt seat to correct height for work
* Be sure feet are flat on floor when child is seated
* Provide more variety in seatwork

Clumsy in classroom/halls; gets lost in building
* Move classroom furniture to edges of room
* Send student to new locations when halls are less crowded
* Provide visual clues in halls to mark locations
* Match student with partner for transitions

Can't get on or off bus independently
* Allow student to back down stairs
* Provide additional, smaller stairs

Can't get jacket or coat on/off
* Place in front of student, in same orientation each time
* Provide larger size for easier handling

Drops materials; can't manipulate books, etc.
* Place tabs on book pages for turning
* Provide small containers for items
* Place all items for one task on a lunch tray

Inattentive, hyperactive, distractible
* Decrease availability of distracting stimuli (e.g., visual or auditory)
* Provide touch cues only when student is prepared
* Touch students with firm pressure
* Provide frequent breaks in seatwork

Poor pencil/crayon use
* Use triangle grip on pencil/crayon
* Use fatter writing utensil
* Provide larger sheets of paper
* Provide paper without lines
* Provide paper with more widely spaced lines

Poor cutting skills
* Provide adapted scissors
* Provide stabilized paper (e.g., tape it down, or use large clips or C-clamps)

Unable to complete seatwork successfully
* Provide larger spaces for answers
* Give smaller amounts of work
* Put fewer items on each page
* Give more time to complete task
* Change level of difficulty

Loses personal belongings; unorganized
* Make a map showing where items belong
* Collect all belongings and hand them out at the beginning of each activity

Doesn't follow directions
* Provide written or pictorial directions for reference
* Provide cassette tape of directions
* Allow student to watch a partner for cues

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